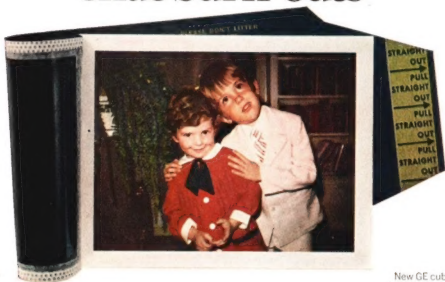




# Polaroid's New



## ends burn-outs



Louvers control light.  
Automatically.

New GE cube. Twice as  
bright as standard cubes.



Polaroid introduces a new line of cameras that uses a flash system coupled to the focusing system. When your picture is in focus, the flash is set for just the right amount of light on your subject.

Did you ever get flashcube shots like the bad ones above? Polaroid's new 400s with Focused Flash makes this yesterday's problem. Focused

Flash measures the exact light you need, for any distance. And it's automatic as you focus the camera. Just shoot normally.

For close-ups (3½ feet), little louvers close over the flashcube. This prevents burn-outs and gives you soft light as in the picture at the bottom.

Now focus on a group shot as far back as 10 feet. The louvers open wide. And the new GE Hi-Power Cube, over twice as bright as



# Focused Flash



ends black-outs



standard cubes, gives you extra reach. (It delivers the extra brightness in the picture on the right below—no more faces left in the dark.)

There are four models in the new Polaroid 400 Land camera series. They all give you color pictures in a minute and come with electric eye, electronic shutter and superimposed-image rangefinder.

(The 450, our most advanced model, even watches your watch for you and "Beeps" when your picture is developed.)

Prices for Polaroid's new 400s start at under \$60 without Focused Flash, under \$70 with it. Spend the extra \$10. Your camera will know just how far to go.



**On Polaroid's new 400s.**

# Cutty Sark. The only one of its kind.

In the clipper era, magnificent tall ships sailed herculean races from China and Australia.

The stakes: Fortunes and reputations. Only the fastest clippers challenged Cutty Sark.

Here are three. None have survived. Only Cutty remains in permanent berth in England. Today, as a century ago, Cutty Sark is unique.



*Thermopylae*, fastest of the tea clippers for years. But in 1872, after the most famous and controversial clipper race of all time, Cutty Sark was declared winner of "the blue ribbon of the Pacific."



*Ariel*, one of the sleekest, most beautiful clippers ever built. In 1872, she left Shanghai a day before Cutty Sark. Cutty beat her home by a week.

*Derwent*, constant rival of Cutty Sark's in the days of the Australia trade. In 1888, Derwent departed Sydney two weeks ahead of Cutty Sark. Cutty was home first by three days.



Illustrations and text from "The Log of the Cutty Sark" reprinted with permission of Brown, Son & Ferguson, Ltd., Publishers.

Cutty Sark's century-old reputation is honored by the Scots whisky that took her name. For generations, Cutty Sark has blended only Scotland's best whiskies to create the exceptional Cutty Sark taste... and the character only Cutty Sark can offer. Cutty Sark. It stands alone. You'll know why.



For exact replica of antique 3-pint "Liverpool" Cutty Sark picture, above, send check or money order for \$4.95 to Cutty Sark Picture, P.O. Box 56, New York, N.Y. 10046. Offer void where prohibited.





# Today, modern medicine has learned how to take care of almost any illness you might get.

## Now all you need is someone who'll take care of you.

If you've got heart trouble, you see a cardiac specialist. If it's your lungs, a pulmonary man. Your nerves, a neurologist.



By the time he's ready to decide what kind of doctor to be, he's already headed away from family practice. He's had no experience caring for people with minor illness, outside a hospital setting. And the people he's studied with, and come to admire the most, are surgeons, neurologists, internists.

What we need to do is change our medical education system so that it doesn't discourage students from going into family practice. After doing basic classroom work, students should have a chance to study, and do their internship and residency, with a family doctor.

They could work with him, in his office in a community, and learn about family practice from someone who understood it and was devoted to it.

Of course, only specially certified doctors would be allowed to teach in that situation. There would have to be strict controls on what

the physician's assistant would be allowed to do.

Such a change will bring its own problems, of course. Hospitals will have to learn to get along without some of the interns and residents who work for them now. They'll have to learn to make better use of the talents of the people they already have.

And each of us will have to get used to seeing assistants working side by side with our family doctor. If we have one.

But however difficult it may be to change the system, it'll be well worth it.

After all, once you have a good family doctor looking after you, there's a good chance your heart, lungs, and even your nerves, will be quite able to look after themselves.

### We need each other.

But who do you turn to, to look after your health day in and day out, to help see that your little illnesses don't become big ones?

The family physician, formerly known as the general practitioner or GP.

But today, believe it or not, that kind of doctor is virtually a dying breed. Today only 15% of our practicing physicians are in family practice.

It isn't that today's medical students don't want to go into family practice. On the contrary, many of them do.

Sad to say, their medical education is what turns many of them away from it, toward the other specialties.

Today's med student spends his first two years of med school in the classroom, learning basic medical science. He has almost no contact with patients. Then in his last two years, he works with patients. But they're hospital patients, already sick with a specific illness. So the young doctor begins to get used to treating sick people, with fairly serious illnesses, using complicated and costly hospital equipment.



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kitchen sinks?



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buy it from a friend.



Channel 11's TV Auction April 25-May 1

# Clean & Green!

We know a place where you fall asleep to the sound of the wind in pine forests, and the scent of pine on the fresh night air — It sure beats traffic noises and gasoline fumes!

It's a place called Hot Springs Village — just outside Hot Springs National Park, Arkansas, one of America's newest, freshest, cleanest vacation-leisure living communities.

Hot Springs Village is being built right now, in one of the beauty spots in Mid-America — the rolling hills and green valleys of the Ouachita Mountains. It's an area where pollution is unknown, where the builders are keeping it that way.



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In Hot Springs Village, you are a part-owner of all common properties — underground utilities and cable TV service, a modern sewer system, paved streets and water usage. You're also a fully-qualified member of the Country Club, with free privileges of the golf course without greens fees, the swimming pools and all other recreational facilities for the family.

We're proud of our Clean and Green Hot Springs Village — of the fine lakes and golf courses and lovely homes being built here. We know you will like its freshness, too. We invite you to discover more about it. Just mail the post-paid card for lots more information — and for an interesting vacation invitation for your family.

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Your name and address on the coupon will bring you a brand new full color brochure on "Excitingly Different Arkansas" — 40 pages of information and pictures of our clean-and-green state. Also, please check if you would like the other free booklets.

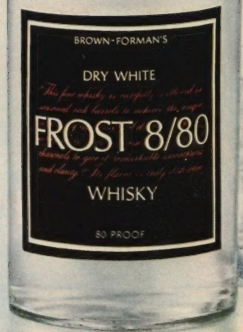
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And here's why.

The mellowing is done in carefully seasoned oak barrels.

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The taste is dry.

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## LETTERS

### Abortions and Ecology

Sir: It is very encouraging to find out that the value placed on life does not end with the ecology program (March 29).

Ecologists have (and rightly so) placed a great value on the ducks' and the alligators' lives. It is beyond me, however, why they have not taken up the banner of the conservation of the human species and its dwindling civil rights. The churches should not have to carry a banner that the Government should be waving.

GEORGE ANN KUEHL  
Richland, Wash.

Sir: Let the "religionists" follow their own consciences, but not try to dictate to or condemn others who think differently.

Historically the church has committed far too many murders, and in the name of God, for it now to attempt to invoke the Sixth Commandment on behalf of embryos unborn and not yet really human.

J. ADDISON SMITH  
Seattle

Sir: Aren't those people who condemn abortion today the same ones who condemned contraceptives a few years ago? Don't they know that contraception is better than abortion, and abortion is better than infanticide? Infanticide is a horrible thing, and it is already practiced widely. Only nobody ever calls it infanticide—it usually goes by some other name, like neglect.

SUSAN MCCUTCHEON  
Lake Forest, Ill.

Sir: God bless those who are fighting liberalized abortion laws. I cannot see how a Christian can take any other position. We who baptize infants and bury the dead with rites of Christian worship cannot possibly stand by while innocent human life is forced from a mother's body, deposited on a surgical tray and burned with common debris in a hospital incinerator.

(THE REV.) DAVID W. SIMONS  
Barnesboro, Pa.

Sir: If a fetus is classed as human life, as claimed by anti-abortionists, why is an aborted fetus not accorded the burial that a full-term dead baby receives? Likewise, why does a dead fetus, the result of a miscarriage, not receive burial as a human? The answer would seem to me to be that a fetus, aborted by accident or design, is not properly considered a human life until it is fully formed, for until then it cannot live as a human being.

FRIEDA SMITH  
Auckland, N.Z.

### New SST Challenge

Sir: I am pleased to see sanity prevail in the U.S. Senate with the cancellation of funds for the SST (April 5). Seattle will survive, and now maybe the rest of us will.

But let's get together now. Let's see Ottawa and Washington pass legislation banning SST overflights—whoever operates and builds the planes.

BRIAN VICKERS  
New Westminster, B.C.

Sir: Can't any of the backers of the SST and "free enterprise" come up with a consortium or something to raise the \$135 million to keep the next stage of the

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The secret of Grant's 8 Scotch is still in the family.  
And you share it every time you open the bottle.

Since 1887, the Grant family of Glenfiddich has handed down the secret of making great Scotch from father to son.

It began with our founder, Major William Grant. He knew it would take more than just a special blend of fine grain and Highland malt whiskies to make a new brand successful. It would take the dedication of the entire Grant family to making Scotch with special care and attention year after year.

Today, after four generations, we Grants still follow the Major's advice. We're still a family-owned and family-operated business. And we still watch to see that Grant's 8 Scotch is carefully aged for eight years to assure the smooth, light, balanced flavor that's enjoyed by millions.

That's what the secret of Grant's 8 Scotch is all about. And you share it every time you open the bottle.



Grant's 8 Scotch: share our family secret.

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and carefully administered. The credit manager, an executive on industry's financial team, makes far-reaching judgments. Yet with each decision extending credit, he signifies his confidence in his fellow man. It means he really believes. No wonder the "American way" has been so successful. With that kind of attitude, how can you miss?



project alive? If the thing is as good as its backers claim, they ought to put their money where their crying towels are.

LINDEN M. MALIK  
San Bernardino, Calif.

Sir: The Senate has scored its *coup de grâce* against the SST. Now then, let's see if Senator Proxmire will have any second thoughts after he sees all of the Anglo-French and Soviet SSTs coming into and leaving J.F.K. Airport in New York City while our commercial airline industry withers on the vine. I think the anti-SST forces have made a very serious mistake.

FRANK F. RUSSO  
Pittsburgh

Sir: Your article, "William Proxmire, the Giant Killer," (March 29) is misleading. Senator Proxmire has not killed any giants. He has simply caused 42,000 more aerospace employees to lose their careers (not jobs). The SST money will now be spent on more "worthwhile" welfare projects. Please tell me again how welfare helps our balance of trade.

WILLIAM ALLEN THAYER  
Playa del Rey, Calif.

Sir: Proxmire "the Giant Killer" is in line for kingship if the David and Goliath story has political significance for 1972.

The Spartan Senator from Wisconsin, who doesn't believe in defeat no matter what the odds, is the kind of culture hero the Democratic Party needs for its myth-making machine in 1972. He is living evidence that this country has not run out of real heroes.

DAVID GEORGE  
Seville, Spain

## Calley as MOY?

Sir: My early nomination for TIME's Man of the Year is Lieut. William Calley, scapegoat of a war we don't know what to do with. What a laugh: convicted of pre-meditated murder (April 12). All of us who called for those bomb-bay doors to be opened while serving in World War II knew we were going to kill civilians as well as military. And what about Hiroshima?

Nixon could pull off the political maneuver of the decade by letting this thing go on till election eve, then granting a full pardon.

BARNEY MILLS  
El Paso

Sir: America's collective conscience can now rest peacefully, knowing that we have justly incarcerated the man responsible for all the war crimes committed by the allies in Southeast Asia. With Lieut. Calley behind bars, our mission of good will in Southeast Asia will be able to proceed without the recurrence of any American-initiated atrocities.

PAUL HOLMES  
Clinton, N.Y.

Sir: I wonder what Lieut. Calley's fate would have been if he had refused to carry out the orders of his superiors.

HELEN B. RAMER  
Washington, D.C.

Sir: There have been Calleys in all wars, on both sides, who have vented their sick sadism upon prisoners of war, and who have found a multitude of glibly typed who fall for their rationalizations.

Shed not a tear for this man but feel



# The grand luxe service of a Paris hotel is on Air France.

le portrait de  
la Marquise d'Argenson

le client

la cliente

la coiffeuse

la gouvernante

le deuxième  
cuisinier

le premier  
cuisinier

la dame  
du vestiaire

le garçon

le groom

le bagagiste

la femme  
de chambre

le valet  
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le sourire

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ter of fact, one cable could support 20 fully-loaded cars.

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At Aspen Highlands, not far from Royal Gorge, all the lift ropes are made by U.S. Steel. The main lift, shown, takes you to an altitude of 11,500 feet.

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GEORGE R. SUNN  
Schenectady, N.Y.

#### Stone in the Stomach

Sir: Who needs a \$22,500 bathroom [March 29]? No wonder the protesting students, blacks and other underprivileged members of our lopsided society think the only solution to our ills is to tear everything down. I feel one of those "polished stones" at the pit of my stomach.

(MRS.) ALICE VANDENBERG  
Dolton, Ill.

Sir: I realize that in this great country of ours there will always be the haves and the have-nots, and I certainly do not begrudge people who have come up from the bottom and made their money the hard way their fancy bathrooms. But on the other hand I cannot help wondering if these people have paid their fair share of taxes. Also I have a question: How do you clean a washbowl lined with gold leaf?

MRS. RICHARD HOBBS  
Galesburg, Ill.

► Wash it as you would good china. Do not use abrasives.

#### A Responsive Chord

Sir: Your article on compression fractures of the vertebrae, "Snowmobiler's Back" [March 15], struck a responsive chord. For several years now I have been studying the vertebrae of Canadian Eskimo skeletons recovered from archaeological sites, some of these dating back a thousand

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## What's best to take for Dull, Throbbing Pain Of Nervous Tension Headaches?



Doctors who specialize in treating headaches state most headaches are caused by emotional tension and stress. Anyone who suffers from tension headaches knows only too well how the throbbing, pounding pain can dull your efficiency, slow you down and play havoc with your nerves.

What's best to take? Clinical tests by doctors on over 500 patients who complained of tension headaches, proved Anacin® relieves nervous tension headaches just as effectively as the expensive leading prescription. Yet Anacin needs no prescription and costs far less.

Here is other convincing evidence about Anacin. Replies from a survey of over 1600 specialists in internal

medicine showed *twice as many doctors* said they would recommend their patients use the Anacin formula to relieve pain over that of the other leading extra-strength tablet. Just consider that—*twice as many doctors prefer Anacin.*

You can trust Anacin to relieve headache pain in minutes. Then its nervous tension and painful pressure on nerves go, too. Anacin lets you do a better job. Lets you function better.

Despite its great strength, Anacin is not habit-forming and it's so gentle acting on the stomach.

It makes good sense to take fast acting, extra strong and doctor approved Anacin Tablets.

# It has recently been that a lot of you people

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| They don't care about customers                | 21% |

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We'll discuss any issues of the day, any practices of the present (including our legal mumbo jumbo and policy confusion) and give you our feeling about the future and what the coming changes will mean to you.

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**THE TRAVELERS**

years. One of the things noted was an extremely high frequency of compression fractures, with 45% of the adults having at least one fractured vertebra. The cause became quickly apparent the first time I rode on an Eskimo sled. The sled, of course, has no springs, and the jarring is transmitted directly to the rider's back.

Today many Eskimos are abandoning their dog teams in favor of snowmobiles, but the compression-fracture problem, it seems, will still be with them. Particularly vulnerable will be the poor fellow who rides a sled towed behind the snowmobile, a common Eskimo practice.

CHARLES F. MERIS  
Tempe, Ariz.

#### It Was a Land Rover

Sir: In *TIME* [March 22] there is an excellent color photograph of a Land Rover. The caption to this photograph describes the vehicle as a Jeep. I am sure you will understand when I say that we are surprised that a magazine with your reputation for accuracy has described our product by the name of its principal U.S. competitor.

J.K.S. CARPENTER  
Sales Director  
The Rover Company Ltd.  
Solihull, England

#### Attractive Alternative

Sir: Your article on the VLCC tanker *Europort* [March 29] cited a perfect example of the kind of foolhardy action that results in the fouling of our oceans and beaches by oil tankers. It is fright-

ening to realize that in order to save four days' time, the captain of the tanker was willing to risk damage to his ship and the "pollution of beaches from Holland to Spain." Penalties should be levied and be stiff enough to make the loss of time a very attractive alternative.

SAMUEL STOCKHAMER  
East Northport, N.Y.

#### Moonlighting Wrestler

Sir: The new TV season sounds incredible [March 29]. Cop turned priest? How about featuring a bulldozer operator turned brain surgeon, a Sumo wrestler who moonlights as a ballet dancer or a defensive lineman who embroiders baby clothes to pay for a hamburger franchise?

MRS. THOMAS CARPENTER  
Clarksburg, Md.

#### A Tidal Wave

Sir: I was sorry to read your public chastisement of our closing of *Father's Day* [March 29].

To produce in the theater today takes great courage. New playwrights and composers are shying away from the New York theater because of its precarious state on and off Broadway. Investors are reluctant to part with capital, and audiences, due to the limited entertainment dollar in today's economy, go for the sure hit or just don't go.

With the approval of the director and the author, we put together a production of which we were very proud. So proud, in fact, that Mr. Kipness and myself personally invested nearly one-third of the en-

tire capitalization. Opening night, the four major television reviews were extremely negative. They were joined by *Newday* and the *Long Island Press*, with their large Long Island following of theatergoers, and the *Newark News*, which reaches the New Jersey commuters.

Then came the fatal blow: the *New York Times* review. The morning review in the *Times* is like a tidal wave which can either let you ride high on the crest of success or drown you.

Yes, I would put up a fight for a run, and Mr. Kipness and I have lost hundreds of thousands of dollars putting up futile fights against negative notices. For a show needs a great deal of money to advertise, and these ads must contain favorable quotes. Audiences are not willing to risk their money to prove the critics wrong. If they did, they might discover, as I believe they would have discovered at *Father's Day*, some really remarkable theater.

LAWRENCE KASHA  
Manhattan

Sir: T.E. Kalem's piece on *Father's Day* made us aware that another production of this splendid play should be done immediately. We've presented Hailey's other full-length works with some success in Washington, D.C. Thanks to *TIME*, the capital will see *Father's Day* too.

DAVEY MARLIN JONES  
Artistic Director  
Washington Theatre Club  
Washington

Address Letters to *TIME*, *TIME & LIFE* Building, Rockefeller Center, New York, N.Y. 10020.

# WHICH ONE?



Sure we're going to tell you the electric toothbrush is better. It's a General Electric ad.

But there are a lot of good reasons why. A GE toothbrush brushes up to 2,000 strokes per minute. It gets to each and every surface. It is designed to help prevent tooth and gum problems. It makes brushing easier (ask your dentist). And much more fun (ask your kids).

Shown, our new Dual Motion beauty. Made to brush up and down. Or back and forth. Whichever way your dentist recommends.

Now, which one would you choose?



GENERAL  ELECTRIC



AMERICAN SALES THROUGH... Robert C. B...  
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New York, New York 10020



# TIME

THE WEEKLY NEWSMAGAZINE

April 19, 1971 Vol. 97, No. 16

## THE NATION

### AMERICAN NOTES

#### The Great Chop Forward

It is one of the anomalies of the post-war period that for more than 20 years two of the world's three great powers have refused to mingle. Historians will one day ponder the fear of contagion that prevented the U.S. and China from exchanging diplomats or scholars, or from trading officially in even so innocuous an item as firecrackers. They may be even more perplexed by the fact that when the barriers were finally breached, it was done by Ping Pong players. This week the U.S. table-tennis party of ten men and five women is in China at the invitation of Peking. Seven U.S.-employed newsmen also were admitted.

President Nixon deserves some credit for being the first U.S. President to extend a conciliatory hand to Mao's China. He eliminated the U.S. ban on travel to China, and had the temerity to call China by its legal name. But the great chop forward was executed by the superb play of the Chinese table-tennis champions at world competition in Nagoya, Japan (see SPORT). Peking obviously saw no danger of humiliation in inviting the American team, which ranked about midway in the 54-nation field, to play exhibition matches in several Chinese cities, with all expenses paid by Chairman Mao's paddle-minded government. Yet it is a bit unsettling to think that a historic new Open Door policy may have been created by an expert flick of the wrist or that sport was purposely subverted to the uses of diplomacy.

#### Zoo Story

The desperate financial crisis of America's large cities stems partly from the escape of millions of residents into the suburbs, where they turn their backs on the decaying centers and concentrate on new tax problems of their own. But St. Louis has demonstrated that this process can be reversed if the city has something distinctive to offer. St. Louis has a beloved zoo, where children can chuckle at elephants that play tubas and chimps that ride bikes and drive Jeeps. Admission has been free. The zoo was going broke, so last week residents of the suburbs voted voluntarily to aid the city and tax themselves. By a margin of 4% they approved a special tax district embracing both city and suburbs to save the zoo.

#### You Know Me and Horses, Al

Hiyu, Al. It's my pleasure to hear your voice again. How's things on the Coast? The babies been coming home for you at Santa Anita? Good boy. Here, you ask? Here things ain't so copacetic. In case you ain't heard, we got off-track betting in New York City now—first in the nation, I agree, Al; that's got no class at all. This wisenheimer, Howard Samuels, didn't have nothing to do since Arthur Goldberg beat him in the Democratic primary for Governor last year, so he up and organizes this Off-Track Betting Corp. for the purpose of bringing new scratch into our not-so-fair-any-more city.

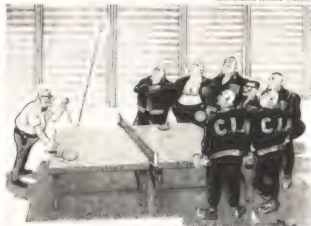
Now in all fair play—and you know me, Al, I'm a fervent exponent of fair play—I gotta admit that it looks like a



BETTING WINDOW AT GRAND CENTRAL  
The bookies' action has gone legit.

good hustle, fiscally speaking. Why, on the first day alone, the two betting parlors in Forest Hills and Grand Central Station and a phone joint pulled in a nifty \$62,306! But like you said, Al, where's the class? No leaning over the rail cheering them babies home, no hanging around the paddock with Charlie Highpockets and Danny the Dip. Just stand in line—hoo, boy, what lines!—and place your bets.

And the confusion! At Grand Central you can't tell the action crowd from the nine-to-fivers. Singapore Sammy stopped there to put a saw on Carry-Me-Back in the fifth at Roosevelt and wound up on the 5:14 to Greenwich. And some jerk commuter in a sulky tie accidentally picked up 800 green ones on the daily double. Our esteemed bookies are now very upset persons, since their action has now gone legit. The whole deal, Al—well, it's got no romance. And you know me and horses, Al. When it comes to the ponies I'm your original romantic.



"NOW, MEN, WITH THIS TYPE OF PING PONG BALL,  
YOU CAN PICK UP A CONVERSATION THREE MILES AWAY!"

TABLE-TENNIS TEAM BOARDS PLANE FOR HONG KONG

# The President Digs In on Viet Nam

SOME dramatic action seemed needed amid the fresh divisions over the war. In the uproar over the Calley conviction, there was a yearning from both left and right to end it all. Democrats were demanding time limits on U.S. involvement. Congressional hawks were defecting. Yet when Richard Nixon appeared on television to discuss his embattled Viet Nam policy, he changed virtually nothing. He delivered a fox-hole speech, digging in tenaciously in defense of his existing position.

It required political courage to cling to an increasingly unpopular policy. Yet there is also something disconcerting, and a measure of his insecurity, in the defensiveness of a President who acknowledges that his words might not be believed and explains that "I do not ask you to take what I say on faith." Essentially, Nixon restated his determination to disengage from Viet Nam gradually and to end the war in such a way that "each one of us will come out of this searing experience with a measure of pride in our nation."

**Unqualified Success.** Nixon announced a small increase of the troops to be withdrawn between May 1 and Dec. 1; from 12,500 to 14,300 each month. The timing will allow him to assess the stability of the Thieu government in the October elections and the capability of the Communists to renew offensives in the autumn-winter dry season. If extended, that rate would reduce U.S. involvement to 25,000 troops by Election Day and sharply reduce the cost of the war, though there would still be considerable expenditures. (see following story). Nixon's reminder that he had campaigned for the presidency on a pledge to end American involvement in the war and his willingness "to be held accountable by the American people if I fail" were interpreted by some as a promise of total withdrawal by election time. Confusion also stemmed from his mention of a goal of "total" withdrawal, but he refused to cite any date for its achievement. In effect, the President seemed to be promising a level of U.S. engagement that he considers politically tolerable while he continues to keep as many options open as possible until election eve.

Nixon again tried to walk the tight-rope of a policy that seeks to reassure the South Vietnamese that they are not being abandoned, poses a continuing threat to the enemy—yet still promises withdrawal. Once again he fell into ambiguity. His plan, Nixon said, was "to end American involvement just as soon as the South Vietnamese have developed the capacity to defend their country against Communist aggression." Then he cited the damage inflicted on the Communists in the Cambodian incursion and claimed to have hurt the enemy even more in the Laos operation. That led Nixon to con-

clude without qualification that "Vietnamization has succeeded," a statement reminiscent of Republican Senator George Aiken's wry advice five years ago: that the U.S. unilaterally declare victory and leave. Why, then, his critics could ask, is Nixon not ready to quit the war now or set a deadline for doing so?

**Nightmare.** The answer would seem to be that Nixon is not at all certain that the South Vietnamese could actually survive alone yet. He suggested that a precipitate withdrawal from Viet Nam would "consciously turn the country over to the Communists." Nixon argued that "this way would abandon our friends, but even more important we would abandon ourselves. We would plunge from the anguish of war into a nightmare of recommitment. We would lose respect for our nation, respect for one another, respect for ourselves." Moreover, he wants to use the U.S. presence as "a bargaining counter" to win the release of U.S. prisoners of war.

Nixon's nightmare of the torment that would rack the U.S. if the nation were to seem defeated in Viet Nam has been a recurring phenomenon. One Administration official even claimed that "if we set a withdrawal date now, the domestic reaction would be worse than it was to the fall of China and the McCarthy period." Given the weariness with the war, that is highly arguable.

Indeed, there is a new danger of violence as peace groups press their plans for demonstrations in Washington beginning on April 24. "It is obvious that Nixon is not going to give one inch," observed one of the antiwar leaders, Sidney Peck of the People's Coalition for Peace and Justice. "He is intensifying the antiwar feeling. He is asking for trouble." Demonstrators plan to block streets near the Capitol, the Justice Department and the Pentagon.

Nixon is undoubtedly right in his belief that Americans cannot readily accept the bitter possibility that 45,000 Americans may have died in Viet Nam to no enduring purpose. While some may have winced at his bathos, Nixon's recital of four-year-old Kevin Taylor's salute as the President awarded a posthumous Medal of Honor to the boy's father Karl was a reminder of the personal courage and individual suffering of U.S. troops in the war. "I want to end this war in a way that is worthy of the sacrifice of Karl Taylor," Nixon said. Yet others could wonder how many more Karl Taylors need die, however nobly, for purposes that are no longer clear or perhaps even attainable. Too long ago, the observation was made that the only thing worse than a bad solution in Viet Nam now is the same solution a year or two from now—and so many additional deaths later.

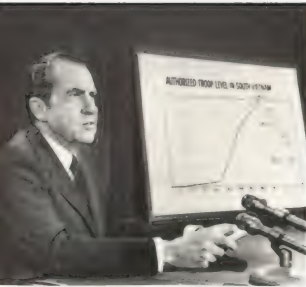
ROLAND L. FREEMAN



HOLY WEEK ANTIWAR PROTEST

VIETNAMESE WOMEN AT SAIGON AIRPORT





NIXON WITH VIET NAM TROOP-LEVEL CHART



PECK WITH U.S. BOMBING-LEVEL CHART

## The Cost of the War After It's "Over"

**T**O date the U.S. has expended 44,876 American lives and \$120 billion on the Viet Nam War. If all goes according to the schedule Richard Nixon announced last week, the number of American troops left in Viet Nam as of Dec. 1 will be about 184,000. Precisely what happens after Dec. 1 has yet to be decided, of course, but some projecting into 1972, 1973 and even beyond is already possible. The White House ventures no predictions, but the men in the Pentagon and State Department who must carry out future policy are working on the plans.

If the slightly increased withdrawal rates announced last week by the President are maintained, U.S. troop levels will be down to 50,000 by late summer of 1972 and just over 25,000 on Election Day. After that, what U.S. military planners have in mind, starting perhaps by mid-1973, is an "Ethiopian-type mission" of somewhere between 3,000 and 6,000 men. That would be a return to the kind of presence that the U.S. had in South Viet Nam at the beginning of the 1960s with its Military Assistance Advisory Group. Before that level is reached, there could still be logistical and support troops in Viet Nam, but once the numbers are in the "Ethiopian" range, the force would presumably be strictly advisory. Yet the cost will still be considerable.

**THE COST IN MEN.** By some time in 1972, while troop levels are still up around 35,000, U.S. casualties could dip to no more than five or six men a week, predicts one high-ranking State Department official. The South Vietnamese will by then be doing almost all of the ground fighting; the Americans will be limited to defense—the kind of routine local

security provided by MPs at the gates and in the watchtowers.

Only for an interim period, ending perhaps in 1973, will American pilots continue to fly B-52, fighter-bomber and C-130 gunship sorties over the Ho Chi Minh Trail. Once these sorties cease, so will U.S. air losses. With further troop withdrawals in 1973, the U.S. may lose no more than a couple of men a month on the average, though enemy terrorists could well inflict heavy casualties in isolated attacks.

**THE COST IN DOLLARS.** The U.S. is turning over an awesome and expensive arsenal free of charge to the South Vietnamese, including 1,200 aircraft from U-17 trainers to F-5 jet fighters, enough to give the South Vietnamese the world's seventh largest air force by 1974 or 1975. The Vietnamese navy already has

received nearly all of a fleet of 1,600 boats and ships; the ground forces are getting—among other things—640,000 M-16 rifles, 20,000 machine guns, 34,000 grenade launchers, 870 howitzers, 10,000 81-mm. mortars, 220 M-41 tanks, 1,000 armored personnel carriers, 44,000 trucks and 40,000 radios. One official (and probably low) estimate puts the cost of this sort of giving over the past three years at \$1 billion.

Maintaining the American forces will naturally become drastically less costly than it has been; it should fall from a peak of almost \$30 billion in 1969 through the current \$12 billion to \$3 billion in fiscal 1973, and perhaps only \$400 million a year once reversion to adviser-only status is complete.

U.S. military assistance to Indochina is now running at around \$2 billion annually, with much the largest share going to Viet Nam. For advisers and military aid together, the U.S. check for Indochina is likely to continue at \$2.5 billion a year at least, and perhaps much more. By comparison, the American forces in West Germany now cost \$1.2 billion a year, though much of that is offset by \$800 million in military purchases by Bonn from the U.S.; the price of American commitment in South Korea has been running well over \$1 billion annually for military aid and maintenance of U.S. troops.

Washington is now so firmly committed to Vietnamization that U.S. planners in the Pentagon assume that withdrawal will continue no matter what happens in South Viet Nam. One of the political and psychological risks is that as long as Americans remain in Viet Nam even as advisers, the South Vietnamese can put part of the blame on the U.S. if things go awry in the war. There have already been recriminations over allegedly inadequate American support for the Laotian invasion. There is another risk as well: whatever happens, Americans will continue to pay an enormous emotional price for their involvement in Viet Nam.



U.S. PLANES AT DANANG AIRBASE  
Toward the seventh largest air force.

So called because there are roughly as many Americans in Ethiopia at a military communications center near Asmara—1,600 servicemen and an equal number of dependents.

## The Calley Affair (Contd.)

WHEN Richard Nixon announced that he would release Lieut. William Calley Jr. from the Fort Benning stockade to house arrest and then added that he intended to review the Calley case before final sentence is carried out, he left several interesting things unsaid. One was that two days before he reportedly awoke at 2 a.m. to wrestle with his conscience over the Calley affair, the President discussed congressional distress at the guilty verdict by telephone with his party's leader in the House, Representative Gerald Ford of Michigan—although the White House insists it was not the President who brought up the subject. Another was that he bypassed Secretary of Defense Melvin Laird when he ordered Calley removed from the stockade. Laird, who now hints that he opposed Nixon's intervention, heard about it only after the fact.

The third Nixon omission was even more significant. The President did not explain that Army machinery was already under way to spring Calley to house arrest, initiated at the request of the defense by Major General Orwin C. Talbott, commanding general of Fort Benning and the convening authority

for Calley's court-martial. Many officers greeted Nixon's intervention with bitter dismay. One said of the President: "He knew all along that Calley was coming out. He just beat us to the punch."

Within the military, Calley friend and Calley foe alike agreed that the President's motives were political. In Viet Nam, SP/5 Willy Rowand of Sunshine Harbor, N.J., observed: "Nixon is playing politics, of course." Said Captain Leroy Sauge of San Antonio: "It is a political decision, coinciding in part with the mail he's been getting. Nixon has also implied that he feels the verdict is unjust. It gives the public an impression that Nixon has no faith in military jurisprudence."

**Morale and Outrage.** No one made that point better than Calley's prosecutor, Captain Aubrey Daniel III, who wrote President Nixon an indignantly eloquent letter that belongs among the classic defenses of the precept that the U.S. must be a Government of laws, not of men (see box). Calley's lawyer, George Latimer, naturally found Daniel's views "entirely wrong," and added: "I believe the President was exactly right in what he did." The President dealt only indirectly with the Calley

case in his TV address. He said he felt he should "speak up for the 2,500,000 fine young Americans who have served in Viet Nam." Nixon added: "The atrocious charges in individual cases should not and cannot be allowed to reflect on their courage and their self-sacrifice."

The Daniel letter stood in stark contrast to the hesitant response of most political figures to the Calley verdict and to Nixon's interference. To be sure, anyone of political prominence could legitimately duck the question by pleading that he did not wish to repeat the President's error of influencing the appellate process. Among the 1972 Democratic presidential possibilities in the Senate, only Edward Kennedy of Massachusetts spoke up for the verdict before the Daniel letter was made public, though his mail has been running solidly pro-Calley. Later, Maine's Edmund Muskie said that Nixon appeared to be prejudging the appeal: George McGovern of South Dakota chided Nixon for seeming to give in to public pressure. Birch Bayh of Indiana said that the President should "keep his mouth shut until the final review and then decide whether justice was served."

Republican Senator John Tower of Texas confided to a dinner companion: "The Calley case could become the best thing that's happened to us politically

## "The Greatest Tragedy of All"

Excerpts from Prosecutor Daniel's letter to President Nixon:

WHEN the verdict was rendered, I was totally shocked and dismayed at the reaction of many people across the nation. Much of the adverse public reaction I can attribute to people who have acted emotionally and without being aware of the evidence that was presented and perhaps even the laws of this nation regulating the conduct of war. To believe, however, that any large percentage of the population could believe the evidence which was presented and approve of the conduct of Lieutenant Calley would be as shocking to my conscience as the conduct itself, since I believe that we are still a civilized nation.

If such be the case, then the war in Viet Nam has brutalized us more than I care to believe, and it must cease. How shocking it is if so many people across this nation have failed to see the moral issue which was involved in the trial of Lieutenant Calley—that it is unlawful for an American soldier to summarily execute unarmed and unresisting men, women, children and babies.

But how much more appalling it is to see so many of the political leaders of the nation who have failed to see the moral issue or, having seen it, to compromise it for political motive in the

face of apparent public displeasure with the verdict.

I have been particularly shocked and dismayed at your decision to intervene in these proceedings in the midst of the public clamor. Your decision can only have been prompted by the response of a vocal segment of our population, who, while acting in good faith, cannot be aware of the evidence which resulted in Lieutenant Calley's conviction. Your intervention has damaged the military judicial system and lessened any respect it may have gained.



"YOU SURE WE WERE FIGHTING FOR THE SAME COUNTRY, WILLIE?"

You have subjected a judicial system of this country to the criticism that it is subject to political influence, when it is a fundamental precept of our judicial system that the legal processes of this country must be kept free from any outside influences. What will be the impact of your decision upon the future trials, particularly those within the military?

Not only has respect for the legal process been weakened and the critics of the military judicial system been given support for their claims of command influence, the image of Lieutenant Calley, a man convicted of the premeditated murder of at least 22 unarmed and unresisting people, as a national hero has been enhanced.

It would seem to me to be more appropriate for you as the President to have said something to remind the nation of the purpose of our legal system and the respect it should command.

I would expect that the President of the United States, a man who I believed should and would provide the moral leadership for this nation, would stand fully behind the law of this land on a moral issue which is so clear and about which there can be no compromise.

What took place at My Lai has to be considered to be a tragic day in the history of our nation. But the greatest tragedy of all will be if political expediency dictates the compromise of such a fundamental moral principle as the inherent unlawfulness of the murder of innocent persons.



in years." A colleague, Ohio's Robert Taft Jr., defended what Nixon did as a proper exercise of his powers as Commander in Chief. Taft argued that it was necessary to restore morale in the armed forces and to calm outrage among the civilian populace.

**Accepting Atrocities.** Nixon may well have damped the popular outcry. Few of the pro-Calley demonstrations planned last week drew much of a turnout: in San Diego, for example, only 250 supporters—a mixed bag of John Birchers and antiwar protesters—turned out to rally and march for Calley. "The President sort of took the steam out of people," said Terry Repsher, a Houston high school junior. Dallas, however, bloomed with bumper stickers demanding: WHY CALLEY? A giant pro-Calley billboard blossomed in Bridgeport, Conn. But from the Timber Ridge School in Skokie, Ill., a Chicago suburb, 41 students wrote Nixon: "We are ten and eleven years old and afraid to grow up in America if a murderer is considered a hero."

Around the world, the admiration that the U.S. had won for trying and convicting Calley was quickly qualified when Nixon intervened in the case. Pro-Americans and anti-Americans were dismayed, for a kaleidoscope of reasons. East Germany's *Neues Deutschland* ran in adjoining columns pictures of Angela Davis in chains and Lieut. Calley leaving the stockade. *Private Eye*, London's black-humor satirical review, ran a cover photograph of Charles Manson with the caption: "I should have joined the Army." In Saigon, the respected, generally critical newspaper *Đuộc Nhứt Nam* objected: "The Nixon decision tacitly acknowledged that the savage and mass killings of Vietnamese civilians was right. A white American who killed hundreds of yellow-skinned Vietnamese was personally freed by the U.S. President."

**Money Problem.** Throughout it all, Rusty Calley remained ensconced at 31-D Arrowhead Road; Calley, his secretary, Mrs. Shirley Sewell, and his girl friend, Anne Moore, invested in a \$35 automatic letter opener to try to keep up with the mail, which peaked at 10,000 pieces in one day and is still coming in at the rate of 2,000 letters a day. They have yet to find a hostile message. Florists' vans turn up daily with bouquets of roses or carnations, and the neighbors bring gifts of food. Since Calley is still considered an officer, his MP guards call him "sir." His most urgent problem is money: the fan mail has brought in only \$3,000 for his defense fund. He has only received about \$15,000 of his share of a \$100,000 advance from Viking Press for *Lieutenant Calley*, an expansion of his *Esquire* "confessions" to Writer John Sack that is to be published in September. But the expenses of his defense have been substantial, and at the moment he is trying to find \$700 to pay the Army for quarters occupied by his lawyers during the court-martial.



BILLBOARD IN BRIDGEPORT  
The outcry was damped.

### Portrait of a Prosecutor

Captain Aubrey Daniel III, the 29-year-old Army captain who chastised the Commander in Chief, did not glow over his courtroom "victory," a term he abhors. At a party shortly after the verdict, when the intense, tight-lipped attorney finally relaxed with a bottle of Scotch, his guitar and a group of friends, he sadly conceded: "When human lives are involved, there is never a winner."

Indeed, the 41-month-long trial was nearly as much of an ordeal for Daniel as it was for the defendant. Early in the case he occasionally betrayed his youth. "Don't be so thin-skinned," Judge

Reid Kennedy snapped at him once after a string of seemingly petty objections. But by the closing weeks of the trial, he was consistently trouncing Defense Attorney George Latimer, brilliantly exposing the aging lawyer's weaknesses on points of law.

**Plain Stationery.** His was not an approach calculated to conciliate. He disdained the legal-fraternity camaraderie that many prosecutors and defense attorneys share. Still, he won the admiration of press and peers alike for his awesome summation.

Typically, when President Nixon intervened, Daniel displayed no outrage. Nor did he consult anyone as to the course he should take or, once his decision was made, what he should say in the letter. He wrote it on plain stationery, without the Army letterhead.

Cynics have noted that Daniel is getting out of the Army in about two weeks. The Nixon letter could be a gilded passport to prestigious law firms. But sensation seeking does not seem to have been Daniel's motive. As one colleague put it, "Aubrey means it when he says he isn't looking for publicity. He was just extremely disillusioned." The letter is a reflection of the Daniel style: cool, analytical, forthright.

These are late-blooming qualities in Daniel. The only son of a South Carolina strip miner, Daniel grew up in Orange, Va. He slipped and slid through four years as a geography major at the University of Virginia. "My grades," he remarked, "were all over the place." His academic performance was so uneven that he was not accepted at the University of Virginia law school. The University of Richmond's law school took him, though, and Daniel buckled down. He became an associate editor of the law review and wound up in the top 10% of his class. After graduation, he went to work for the Richmond firm of Minor, Thompson, Savage & Smithers, but received his draft notice six months later. He quickly applied for, and received, a direct commission in the Judge Advocate General's Corps.

Ironically, he missed, due to the timing of his orders, the standard 16-week course on the Uniform Code of Military Justice before his assignment to Fort Benning. So he had to make do with a two-week briefing. That is the extent of Daniel's military-law training. "I just read the book," he chuckled, "and I never felt shortchanged."

**Hawk to Dove.** Though he prosecuted Calley to the limit of his ability, and was appalled by the scope of the My Lai massacre (once prowar, he is now a dove), Daniel feels no animosity toward the lieutenant. "You can't let these things become a personal matter," he said. "In the long run, it is simply a matter of whether justice is done. If that happens, our society wins."

The Army, needless to say, will be glad to see the outspoken Daniel go. He has no specific plans; but say he intends to pursue his passion: trial law.



CAPTAIN AUBREY DANIEL III  
Cool, analytical, forthright.

## THE ADMINISTRATION

### Bugging J. Edgar Hoover

A top Senate aide used to begin his first telephone conversation of each week with a hearty "F--- J. Edgar Hoover." To the startled listener on the other end of the line, he explained: "Just clearing the lines." During the debate over G. Harold Carswell's nomination to the Supreme Court, Indiana Senator Birch Bayh became so disturbed over an inexplicable strategy and information leak that he called in an expert to examine his office for listening devices. The expert "swept" Bayh's office—the same suite occupied by Richard Nixon when he was a Senator—with a detector and picked up blips from beneath the floor. The floor was pounded until the blips ceased, but Bayh decided against bringing in jackhammers to tear up the concrete to retrieve the dead bug. During his years in the White House, Lyndon Johnson spiced his private conversations with such intimate disclosures about the personal and political operations of his enemies on Capitol Hill that it seemed to many that he had them under FBI surveillance.

**Gestapo Tactics.** Against this background, House Democratic Leader Hale Boggs turned to a colleague on the floor of the House last week and said: "I'm going to make a speech that's going to get national headlines." In a one-minute address, Boggs broke the desultory parliamentary doings with a harsh challenge to the reputation of one of Washington's most powerful institutions—J. Edgar Hoover's FBI. Boggs: "When the FBI taps the telephones of members of this body and members of the Senate, when the FBI adopts the tactics of the Soviet Union and Hitler's Gestapo, then it is time that the present director no longer be the director."

Two weeks earlier, Democratic Senator Joseph Montoya of New Mexico had made the same wiretapping charge at a little-reported political dinner in Denver. But this time the accusation came in the House chamber from a top Democratic leader, and the Administration responded quickly and categorically. Attorney General John Mitchell took time during a Florida vacation to deny charges of wiretapping. Deputy Attorney General Richard Kleindienst followed with a slightly veiled attack on Boggs' drinking problem and emotional instability in the past. Kleindienst said Boggs was "sick, or not in possession of his faculties." But reporters who questioned Boggs after the speech found him motivated only by sober and sensible outrage.

**No Knowledge.** Kleindienst at first offered to let Congress investigate the FBI. Then he qualified the offer, saying that any investigation would have to be limited to the congressional phone-tapping charge, rather than become a wide-ranging look at the FBI that could jeopardize its mission and source

es.\* As the feud progressed, Boggs, too, did some retrenching, admitting that Mitchell might be "technically correct" about the absence of taps. But he continued to insist that the FBI had Congressmen under "surveillance"—perhaps using other electronic devices to monitor their offices. Boggs further blunted his attack by the specious argument that whatever the facts, a number of his colleagues believe their phones are tapped and that "if everyone thinks his phone is tapped, it's as bad as their being tapped. You're sure not going to carry on any business."



HOOVER LEAVING HOME FOR OFFICE  
Attacks on the untouchable symbol.

Boggs and the Justice Department concurred on that, though for different reasons. Said Kleindienst, appalled that Boggs would make the charge without proof at hand: "It's destructive to the country for people to believe that it's being done. How can a Congressman function if he feels his talks with his colleagues or his constituents are being overheard? We agree that it has a chilling effect, and we'd like to have a hearing to get rid of that feeling."

Former Attorney General Ramsey Clark—whose personal disagreements

with Hoover have flared openly in recent months—said that during his eight years in the Justice Department, he had no knowledge of the FBI's tapping Congressmen's phones. He added that it could conceivably be done without an Attorney General's awareness: "It's a relationship that depends on trust." Kleindienst outlined the procedures involved in authorizing a tap: Hoover must submit a request in writing, which is then reviewed by Mitchell. The signatures of both are required before the FBI can cut into a line. Kleindienst added that for the agency to take the initiative on wiretapping is

also unlikely: "I just can't picture an FBI agent out splicing wires someplace at 3 o'clock in the morning, risking observation for an illegal wiretap."

With Boggs promising that the results of his personal investigation would be forthcoming, Congress left for the Easter recess with the FBI in the biggest turmoil since Hoover became the director of the bureau 47 years ago. Under Hoover, the FBI long ago evolved into an untouchable symbol of righteousness to most citizens. The chairman of a House Appropriations Subcommittee often bragged that he never cut Hoover's budget requests. Films, television series and books chronicled the bureau's crime-fighting exploits. The bureau's image has begun to fizzle of late, thanks to Hoover's outspoken beliefs and unwillingness to brook criticism from any quarter. He admitted that he had not even spoken to Robert Kennedy during Kennedy's last six months as Attorney General and labeled Ramsey Clark "a jellyfish" and "a softie."

Last December he angered Spanish-speaking Americans with a racial slur made during an interview with TIME Correspondent

Dean Fischer. Hoover's testiness led to 26 agents and clerks being ordered last fall to withdraw from college courses where professors had questioned Hoover's methods and techniques. Then in January it was discovered that one of them, Special Agent John Shaw, was forced to resign from the FBI and blacklisted by Hoover for writing a private letter to a college professor that was mildly critical of Hoover and the bureau.

**No Peace Clerks.** There have been increasing suggestions that, at age 76, Hoover should resign. He has been criticized for making the FBI too much a lengthened shadow of his own philosophy. Though the criticism suffers as well. It was discovered that Hoover keeps a fleet of

\* The Administration's policy toward telephone tapping was set back last week by a decision from the U.S. Sixth District Court of Appeals (see FBI LAW).

armored limousines around the country that outnumber the presidential limousines. Documents stolen by radical activists from the Media, Pa., FBI office outlined the agency's use of undercover informers: one memorandum encouraged local agents to exacerbate "the paranoia endemic in [New Left] circles that there is an FBI agent behind every mailbox" by questioning radicals about their activities at every opportunity. In the midst of the Boggs controversy last week, the FBI forced the resignations of two low-ranking clerks for their after-hours envelope stuffing at a peace group's headquarters. Until last week there had been a noticeable cooling of the close relationship between Hoover and top Justice Department officials. The names of possible successors cropped up in private conversations at the department. Most frequently mentioned: Supreme Court Justice Byron White.

**Blood.** Throughout the latest round of criticism, Hoover has kept uncharacteristically quiet, apparently because Justice Department officials are worried that further intemperate remarks from the director might irreparably damage his cause. But even if Boggs' charges turn out to be groundless, Hoover's critics, scenting blood, are likely to continue to press for his resignation.

## Moynihan Writes Again

During his two years as a presidential aide, Daniel Patrick Moynihan became known—both in and out of the White House—as the most brilliant and prolific memo writer in the Administration. He churned out a series of pungent, readable and controversial messages to President Nixon before returning in January to a teaching post at Harvard. Academic life has not stilled Moynihan's instincts: not long ago he sent a private letter to Nixon chiding the Administration for its reputation of insensitivity toward personal rights. The missive so impressed the President that he circulated it among his top officials, from where it emerged last week.

Moynihan opened by reporting on some recent conversations with businessmen: "Let me take the occasion to repeat my comment about what I feel to be the serious inattention of the Administration to its reputation with respect to civil liberties and to the general question of 'repression.' Since leaving Washington, I have spent a good deal of time talking to businessmen. (Picking up some consulting fees!) I have met with the boards of the top management of the half a dozen largest banks around the country, with the

equivalent groups in the dozen or so largest mutual funds, with an island (Jamaica!) full of Midwestern meatpackers, cereal manufacturers and such, and quite a number of heavy industry types, the latter at a conference called by the Columbia School of Business.

"I have been astonished—that is the word—to their hostility to the Administration. More than any other thing, what seems to concern them most is the belief that the Justice Department in particular and the Administration in general is intent upon the diminishment of civil liberties in the nation, and has already to some extent succeeded. This feeling is intense. As best I can tell, they mostly get this belief from their children, who absorb it in the atmosphere of the elite universities. But they believe their children, and in consequence, detest the Administration."

**Murder.** The White House, Moynihan charged, had not responded when opportunities arose to dispel suspicion: "This was why I was so concerned at the time about the charge that the Black Panthers were being exterminated. I could get no one, save [Special Consultant to the President] Len Garment, to see how dreadfully potent a charge this was against you. The charge was being made that your Administration was carrying out a systematic plan of political murder designed to wipe out a political party. The charge was groundless, which I could soon enough establish to my own satisfaction. But what was the response of the Justice Department? In effect, 'No comment.' And at the lower levels, a series of hysterical (two meanings intended) statements that this band of six or seven hundred high school dropouts, a few ex-cons and a handful of former OEO employees was plotting to overthrow the state. Good God!"

To Moynihan, there is a reverse logic involved in the Nixon Administration's reactions: "I think I know what is the matter. I saw it happen over and over again from the fall of 1969, when, as we organized our response to the October peace demonstration being led by decent young men, things began to go wrong for you. The Administration began to ask what would please persons known to oppose the Administration, and then would do the opposite. It is a formula for political failure. One of the things that disturbs me personally about all this is that the nation seems to be unlearning so many of the lessons of the late 1960s, which led to your election in the first place and your brilliant first year in office. Really dreadful things occurred when my party was in power but, one by one, your party has, as it were, assumed responsibility for these things."

Concludes Moynihan: "You will recall I came down to Washington to work for you deeply concerned about the stability of the nation. I remain concerned. Vast changes have been made for the better. But in an odd way, appearances are worse."



BERKELEY'S MAYOR WIDENER (SECOND FROM LEFT) & RADICAL COUNCIL MEMBERS

## Welcome to the System

FOR years the more moderate citizens of Berkeley, Calif., urged the town's sizable radical element to drop the politics of confrontation and try to work within the system. With a well-organized campaign, the radicals did just that. By the scant margin of 56 votes, Berkeley last week elected its first black mayor: Warren Widener, 33, a suave former city council member and protégé of radical Black Congressman Ronald Dellums. The insurgents also gained three of four available seats on the city

council, bringing it to an even 4-4 split between leftists and moderates.

The victory scarcely revolutionized in Berkeley politics. There are bound to be important changes, but the goals of Widener and the radicals are not the furniture of barricades: renewed proposals for community control of police, a city income tax on incomes above \$12,000 to ease the current property tax, a special referendum calling for the 18-year-old vote, and a Viet Nam peace initiative.



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Through.**

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## THE WORLD



ASIAN FOREIGN MINISTERS HOISTING GLASSES AT MEETING IN MANILA\*

# A Quieter China in a Calmer Asia

**A**LMOST unnoticed because of the distractions of Viet Nam, the rest of Asia has been undergoing some widespread and fundamental changes. In the past several months, a suddenly cooler China has been the catalyst of a number of gradual shifts that have been taking place in the mood and manner of Asia's capitals. Last week's invitation to the U.S. table-tennis team to visit China was an example of Peking's new approach.

Reports Louis Kraar, *TIME*'s Southeast Asia correspondent: "Slowly, these subtle shifts have added up to form some sharply definable trends: a marked cooling of fears about Peking, a perceptively calmer view of the Indochina war, a reasonably confident acceptance of the rapidly receding presence of both American and British military forces in the area."

Though the fighting rages on in Indochina, elsewhere in Asia a 200-year stretch of almost continuous Western military preponderance is rapidly coming to an end. Two years ago, the U.S. had 740,000 troops on bases from Thailand to Japan; under the new withdrawals announced last week by President Nixon (see *THE NATION*), the total will fall below 420,000 by June 30. By year's end, moreover, the British Far East Command will have shrunk to a token presence of 4,000 men and a few ships based in Malaysia and Singapore, plus three or four Gurkha battalions elsewhere.

The Asians hope that a stability of sorts will be brought about by what Singapore's Foreign Minister S. Rajaratnam describes as a "four-handed poker game." He means a balance of interests between the four major powers that will cancel out the dominance of any single nation. For example, Asian diplomats envision an abiding U.S. interest in the area that will continue to compete with Japan's economic

power. They see the growing Soviet trade and naval presence as a counterbalance to China.

Such views may be far too optimistic. In the past, national conflicts of interest have more often led to war than to equilibrium. Nonetheless, Asian nations outside the Indochina war zone are quietly but quickly rejiggering their old diplomatic patterns for a happier, more peaceful tomorrow. Items:

**THAILAND**, which has been the U.S.'s staunchest military ally in Southeast Asia, has received \$1.5 billion in American assistance. But the Nixon Doctrine and declining U.S. aid have persuaded the Thais that the times are changing. Thus they have announced their intention to withdraw their 11,558 combat troops from Viet Nam. Bangkok has established trade with ten Communist countries. Recently it signed a trade agreement with Moscow and even made token purchases of \$10,000 worth of dried squid and medicinal herbs from Hanoi and Pyongyang. Meanwhile, the Thais are "studying" the question of better relations with China.

**INDONESIA'S** "nonalignment" took on a strong Western tilt after the aborted Chinese-sponsored coup of 1965. But now Djakarta has led the Asian effort to pres-

sure the U.S. into a military withdrawal from Indochina. Lately the Indonesians have begun to talk about normalizing relations with Peking.

**MALAYSIA**, another veteran of a Peking-backed insurgency, has made an even more startling turnaround. Last month Kuala Lumpur accepted its first Chinese Red Cross flood aid; last week it rolled out the red carpet for a sellout tour by the popular Communist Chinese Silver Star Cultural Troupe. With Rumania and other third-party countries acting as the middlemen, Malaysia's pragmatic new Premier Tun Abdul Razak has begun indirect negotiations with China, offering to open trade and diplomatic relations in return for Peking's promise not to support Malaysia's hold-out guerrillas. He has already faced the wrenching decision forced by the "two Chinas" situation (*TIME*, Oct. 5): Malaysia is talking about closing down its consulate in Taiwan.

**SINGAPORE** calmly allows the Chinese to operate a major bank on its soil, the North Koreans to run endless ads in its newspapers extolling the virtues of Kim Il Sung, and Soviet ships to call at its superb port. The Soviet fleet, says Prime Minister Lee Kuan Yew, could be a "useful balancing force" to growing Chinese and Japanese power.

**THE PHILIPPINES** have encouraged efforts by third parties and unofficial emissaries to open channels to Peking, despite the fact that President Ferdinand Marcos is bothered by rapidly growing Communist insurgency at home. Even the South Koreans, who are Asia's toughest anti-Communists, are beginning to talk about trade with China.

Such realignments have been set in motion by some major

RED CHINESE TROUPE IN KUALA LUMPUR



\* From left: Singapore's S. Rajaratnam, Thailand's Phanat Khoman, the Philippines' Carlos Romulo, Malaysian Premier Tun Abdul Razak, Indonesia's Adam Malik, former Malaysian Premier Tunku Abdul Rahman.

developments. One of them is the fact that the fear of China that froze most Asian capitals in the 1960s is rapidly melting away. The failures of Chinese-supported insurgencies in Indonesia and Malaysia have considerably deflated China's reputation as an international troublemaker. Moreover, since the end of the Cultural Revolution with all its attendant hysteria and xenophobia, China has steadily moved toward what Indonesia's Foreign Minister Adam Malik approvingly calls "sensible moderation."

Another powerful factor in the Asian realignment has been the failure of the U.S. effort in Indochina. In their new mood of detachment, Asia's leaders have taken note of the fact that, after all, South Viet Nam accounts for only 6% of Southeast Asia's 293 million population. They increasingly regard Saigon's struggle as a local conflict, one that is not crucial to their own fates.

At the same time, there is deep disenchantment with the way the U.S. has fought the war. The Asians have seen that B-52s and free-fire zones are no answer to a local insurgency, and they are aghast at how badly U.S. technology and firepower have ravaged the countries they were supposed to save. Says the Philippines' Marcos: "I articulate what most of the nations feel—and what is that? Heaven forbid that war should come to their countries, and heaven forbid that the U.S. should duplicate what it has done in South Viet Nam if that war should come to our country."

**Better Body Count.** It is ironic that as Asia enters its so-called "post-Western phase," the U.S. is gaining for the first time a measurable economic (as opposed to political or strategic) stake in the region: offshore oil. In this decade, U.S. and other companies expect to spend something like \$35 billion in Asia searching for oil and building the facilities to process it. Already, major deposits have been located off Indonesia, and other areas, including coastal South Viet Nam, are considered promising. Asia's oil potential is considerable and may eventually help ease the American energy shortage (see BUSINESS). The flurry of interest in oil off Viet Nam, however, seems to have come too late to support suspicions in some New Left quarters that it is being purposely engineered to provide a rationale for continuing the war.

The oil strikes are coming at a convenient time for Asian leaders, who plan to use the next few years to turn inward and grapple with long-neglected domestic problems, including the twin ills of overpopulation and underemployment. According to a new United Nations study, Asia must create no fewer than one billion new jobs over the next 30 years just to keep pace with the population growth. If the U.S. should decide to take on a new Asian "commitment" after Viet Nam, helping create those jobs could be one variety of body count worth achieving.

## PAKISTAN

### The Battle of Kushtia

Fierce fighting raged last week in East Pakistan as Bengali townspeople and peasants resisted the "occupation army" of 80,000 West Pakistani soldiers. Reports have indicated that as many as 200,000 civilians have been killed by the heavily armed West Pakistani troopers. But soldiers have also suffered severe casualties at the hands of irate peasants. The army controlled the capital of Dacca, the vital ports of Chittagong and Khulna, and several other towns. But a ragtag resistance movement called the Bangla Desh Mukti Fauj (Bengal State Liberation Forces) was reportedly already in control of at least one-third of East Pakistan, including many cities and towns. West Pakistani

tonment 60 miles to the south. The 147 men of the company quickly disarmed some 500 Bengali policemen without meeting any resistance and then occupied four additional key points: the district police headquarters, the government office building, the VHF radio transmitter and the Zilla school for boys. Most of the sleeping townspeople did not realize what had happened until 5:30 a.m., when Jeeploads of soldiers with bullhorns drove through the empty streets announcing that a total curfew was to begin 30 minutes later.

Kushtia remained calm for 48 hours while the curfew was in effect, although seven persons—mostly peasants who arrived in town unaware of what had happened—were shot to death for being found in the streets. The curfew was lifted on the morning of March 28, and



WEST PAKISTANI PRISONERS AT KUSHTIA JAIL  
Some soldiers were very surprised.

authorities have almost completely succeeded in obscuring the actual details of the fighting from the outside world by expelling all foreign newsmen from East Pakistan. But last week TIME Correspondent Dan Coggins managed to cross the border from India into East Pakistan, where he visited the embattled town of Kushtia (pop. 35,000). After extensive interviews with townspeople and captured West Pakistani troopers, Coggins was able to reconstruct an account of brutality and bravery that took place in Kushtia during the first fortnight of the civil war. His report:

Kushtia, a quiet town in the rice-growing district near the broad Ganges, fell into a restless sleep on the night of March 25. Without warning, 13 Jeeps and trucks came to a halt outside Kushtia's police station. It was 10:30 on the night the war broke out. Delta Company of the 27th Baluch Regiment had arrived from its base at Jessore can-

the townspeople began to organize a resistance immediately.

That night 53 East Pakistani policemen easily overpowered a handful of soldiers at the police station. Then, fanning out to nearby villages with all the .303 Enfield rifles and ammunition they could carry, the policemen joined forces with 100 college students who were already working for Bangla Desh. The students were teaching the rudiments of guerrilla warfare to local peasants, who were armed only with hatchets, farm tools and bamboo staves. Within two days, the police and students had organized several thousand volunteers and militiamen of the East Pakistan Rifles and laid plans for simultaneous attacks on the five army positions in Kushtia.

At 4:30 a.m. on March 31, a force of some 5,000 peasants and policemen launched a campaign to liberate Kushtia. Thousands of townspeople thronged the streets shouting "Joi Bangla [Vic-

tory to Bengal!" The soldiers apparently panicked at the thought of being engulfed by so many thousands of furious Bengalis. "We were very surprised," lamented *Naik Subhedar* (Senior Sergeant) Mohammed Ayub later, following his capture. "We thought the Bengali forces were about the size of one company like ourselves. We didn't know everybody was against us."

**Instant Death.** The Bengali fighters made no suicidal, human-wave assaults at Kushtia as they have in some places. But the steady drumfire of hundreds of rifles had a relentless effect on the soldiers of Delta Company. By noon, the government building and district headquarters all fell. Shortly before dawn the next day, about 75 soldiers made a dash for their Jeeps and trucks and roared away in a blaze of gunfire. Two Jeeps were halted almost immediately by surging mobs. The East Pakistanis pulled out the dozen soldiers and butchered them on the spot.

The other vehicles were blocked outside town by fallen-tree barricades and 4-ft. ditches dug across the blacktop road. The soldiers managed to shoot down about 50 Bengalis before they were overpowered and hacked to death by peasants. A few soldiers escaped but were later captured and killed.

Before dawn the next day, the last 13 soldiers in Kushtia stole out of the radio building and covered 14 miles on foot before two Bengali militiamen took them prisoner and brought them back to the Kushtia district jail. The 13 were the only known survivors of Delta Company's 147 men. Among the West Pakistani dead was Nassim Waqar, a 29-year-old Punjabi who last January had been appointed assistant deputy commissioner at Kushtia. When an angry mob found his body, they dragged it through the streets of the town for half a mile.

**Little Headway.** Next day the Pakistani army dispatched another infantry company from Jessore to stage a counterattack on Kushtia. At Bishakali village, halfway to Kushtia, the new company fell into a booby trap set by Bangla Desh forces. Two Jeeps in the nine-vehicle army convoy plunged into a deep pit covered with bamboo and vines. Seventy-three soldiers were killed on the spot, and dozens of others were chased down and slain.

All last week, the green, red and gold flags of Bangla Desh fluttered from rooftops, trucks and even rickshaws in Kushtia. Bengali administrators were running the region under the local party leader, Dr. Ashabul Haq, 50, a forceful physician who packs a Welby & Scott revolver and a Spanish Guerita automatic. At week's end, two army battalions established an outpost a few miles from Kushtia. They were reported, however, to be making little headway against furious resistance. Even if the soldiers managed to reach Kushtia, the townspeople were more than ready to fight again.

## CEYLON

### The "Che Guevarist" Uprising

Guerrilla fighting broke out in Ceylon last week and quickly engulfed much of the island. The rebels were members of a Maoist organization called the People's Liberation Front. Their target was the strongly leftist government of Mrs. Sirimavo Bandaranaike, which is not leftist enough for their tastes.

The harshness of Mrs. Bandaranaike's response showed how seriously she regarded the threat. She adjourned Parliament, ordered a 24-hour curfew and sent out her 13,000-man police force and 11,000-man army to crush the uprising. Armored units swept the road between Colombo and Kandy, and air force planes bombed a bridge and textile factory that rebels were holding.

Mrs. Bandaranaike referred to the guerrillas last week as "Che Guevarists," tactfully refraining from any reference to the Chinese, on whom she depends for aid. In reality, the Liberation Front is a Maoist terrorist organization similar to the Naxalite movement of India's West Bengal state. Its 2,000 fighting members, many of whom belong to Ceylon's educated rural elite, grew to 70,000 or more in last week's fighting and outnumbered the armed forces by at least 3 to 1. The Prime Minister at one point went on radio "as a woman and as a mother" to appeal to parents to dissuade their sons from joining the rebels.

Members of the Liberation Front charged that Mrs. Bandaranaike had failed to introduce socialism rapidly enough since she began her second tenure as Prime Minister last May. But their basic complaint—and the reason they attracted so much support—was the island's high unemployment and in-

flation. Some skeptics believed that Mrs. Bandaranaike, acutely aware that she had failed to solve Ceylon's economic problems, had precipitated a crisis in order to silence a group that might develop into a strong opposition. But as the fighting intensified, it seemed clear that the threat to Mrs. Bandaranaike's government was too real to have been invented.

## SOUTH VIET NAM

### Another Sort of H-Bomb

As an off-duty Air Vietnam stewardess, Mrs. Nguyen Ngoc Quy expected to be waved through customs as usual when she stepped off her flight from Bangkok last month at Saigon's Tan Son Nhut airport. Instead, officials opened her baggage, revealing 19.8 lbs. of heroin and an ugly new quirk in American-South Vietnamese relations.

Her arrest provided the first lead in an unfolding scandal that has already embarrassed the regime of President Nguyen Van Thieu. Mrs. Quy, 26, turned out to be a very well connected young woman. She is the daughter of a senior civil servant who works for South Viet Nam's Senate chairman, and is the girl friend of an army major. She lived in a house owned by Vo Van Mau, a deputy in the National Assembly, who is loyal to Thieu's regime. When police searched another of Mau's properties, they found vials that bore traces of heroin—about which Mau claimed to know nothing. A week later, Pham Chi Thien, another pro-administration deputy, was caught red-handed smuggling 8.78 lbs. of heroin from Laos, and now awaits trial. Thien's comely, 20-year-old travelmate slipped by airport police, but was arrested a few days later as she entered one of Saigon's main heroin

AMERICAN BUYING NARCOTICS FROM SAIGON STREET PUSHER





"drops," a three-story cement apartment building on Le Thanh Ton Street.

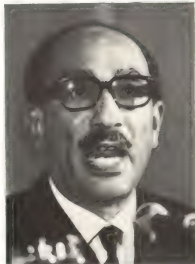
She carried an intriguing address book. Among the names (Thien's included) and lists of transactions were initials police believe belong to another deputy who had been engaged in smuggling heroin. Former General Huynh Van Cao, who headed the pro-government Senate slate in last fall's elections, charged that at least two senators were also involved in heroin traffic and then promptly retracted his statement.

**Tempting Buy.** Drugs are rapidly becoming as great a threat to American forces as the enemy (TIME, March 1). During a sample period last year, military investigators found that confirmed or suspected heroin-connected deaths were occurring at a rate approaching one daily. Marijuana accounts for three-quarters of G.I. drug offenses in Viet Nam, but cheap (1-36th U.S. cost), extremely pure Laotian or Thai heroin is a tempting buy for men seeking temporary escape from the boredom and terror of war. It is less easily detected than pot. Moreover, G.I.s have developed the disturbing myth that if smoked—"snorted"—the drug is non-addictive.

There are major political implications to the heroin problem. One of Saigon's leading opposition papers, the *Tin Dien*, asked sarcastically: "Who wants to kill this regime? The rulers or the Communists?" The fact that some of Thieu's supporters are im-

plicated in the heroin trade does not mean that the government either condones or encourages the illegal trafficking. Nonetheless, the paper pointed out that if Thieu failed to cope with the heroin scandal, it would be a major defeat for his regime. There is also considerable speculation that Hanoi may be facilitating the flow of cheap heroin into South Viet Nam as a means of demoralizing American forces while picking up considerable foreign exchange. With the exception of a few teenage "cowboys" and bar girls, Vietnamese shun heroin, which they regard as declassé and crass compared to opium. Virtually all of it goes into American bloodstreams. In efforts to get Saigon to clamp down on traffickers, the U.S. has already offended the sensitive pride of Vietnamese sovereignty by insisting on stricter customs inspections.

The heroin scandal only heightens already tense relations between Washington and Saigon. After the mauling of ARVN troops in Laos, many South Vietnamese are blaming the U.S. for sending in their troops to do an American job. "At a time when relations between the two countries have sunk to an all-time low," reports TIME Saigon Bureau Chief Jonathan Larsen, "the heroin scandal ticks away like a time bomb in the corner." Since politicking is already beginning for next October's presidential elections, the heroin smuggling will clearly be a major campaign issue.



EGYPT'S SADAT  
A diplomatic offensive.

## MIDDLE EAST

### The Worries of April

Springtime tourists in Egypt who had expected to take the two-hour flight from Cairo to Aswan for a glimpse of the High Dam are having to alter plans. The Egyptian government has announced that for a month or so, Aswan flights are being scrubbed. The cancellation is not difficult to understand. Soviet freighters and air force transports have been ferrying military supplies to Egypt, including jet fighters, sophisticated antiaircraft guns, and additional SA-2 and SA-3 missiles similar to those that already ring the dam and line the Suez Canal's west bank. The suspension of flights will enable technicians to install some of this armament without observation by curious eyes.

The Soviet shipments are a sign of Egyptian President Anwar Sadat's frustration over the stalemated negotiations between his country and Israel. They also increase the worry on all sides that time is running out for Middle East diplomacy and that fighting between Egypt and Israel may break out again. The Egyptians have been on record for eight weeks as going along with Swedish Mediator Gunnar Jarring's effort to extract commitments by both sides (basically Egypt would recognize Israel and agree to a binding peace; Israel would commit itself to withdrawal from all occupied territory). Jerusalem, on the other hand, has steadfastly refused to agree to full withdrawal.

**National Responsibility.** Two weeks ago, Sadat elaborated on his position by offering as a first step a plan for reopening the Suez Canal—now clogged by silt and disabled ships—after nearly four years of inactivity. Under the Sadat plan, Israeli troops would pull back from their Bar-Lev Line on the canal bank to a line in the vicinity of El

## A God's Children in the Dock

IT was a scene befitting a bad Khmer opera. There in the dock were the children of the deposed godking, on trial for their lives. The judge, a rotund man given to spasmodic eyeball rolling, was the same judge who a year earlier had condemned their father to death *in absentia*. At the end of each day's session, scores of the curious spectators who filled the drab, stifling courtroom would nervously make their way to the two defendants, many prayerfully clasping their hands before their faces in the traditional Cambodian gesture of respect.

The frightened young man and woman on trial in Phnom-Penh last week were two of the eight children of deposed Premier Norodom Sihanouk. They were Prince Norodom Naradipo, 26, a quiet-living bachelor and connoisseur of traditional Khmer theater who was once thought to be a likely successor to his father; and his half sister Princess Botum Bopha, 20, who is the mother of a young child. They stood accused, along with 18 other defendants, of espionage and propaganda activities in behalf of the Communist and Sihanouk cause, an act punishable by death.

A Cambodian attorney said the trial was one more effort on the part of the Lon Nol regime "to get at Sihanouk [in exile in Peking] by getting at his children." All things considered, however, the outcome was not so tragic as it might have been. The military jury freed the princess and nine of the other defendants but sentenced her brother to five years at hard labor. Still to be tried is another Sihanouk son, Prince Norodom Ranariddh, who is charged with espionage.

BOTUM BOPHA & NARADIPPO





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A few years from now you just might not mind at all. Because you might not have an "electric bill". You, and the owner of this home, may be able to produce all the electricity you need with a "fuel cell" powered by natural gas. The same natural gas that saves you so much money on heating, cooling and cooking today.

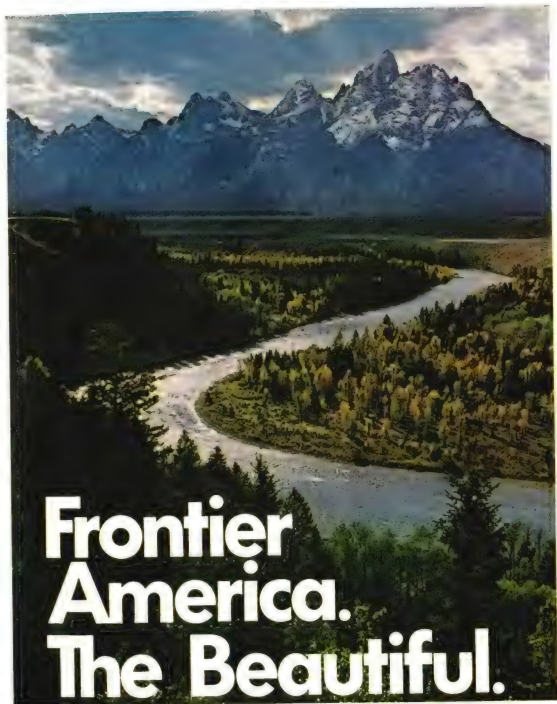
The gas fuel cell makes electricity chemically. Natural gas is piped in. It takes a safe chemical bath...and comes out

electricity! Enough electricity for lights, TV, stereo, kitchen appliances, power tools and all the little labor-saving, luxury-living gadgets that are here today or on their way.

When can you order yours? Not just yet...but maybe sooner than you think. We have a working model of the gas fuel cell now. And yours could be ready before long. If you have natural gas, you're all set. For you, we're going to make electricity as economical and dependable as natural gas.

There's a lot more coming from natural gas energy.

**Northern Illinois  
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# Frontier America. The Beautiful.

Just blessed America  
begins the beautiful tale.  
Majestic purple mountains. Snow-capped  
rocky peaks. Fresh clean air to cool the  
sun-warmed soft green mountainsides.  
Rolling fertile plains. . . alive with cattle that  
must be seen to be believed.

All stretching across 17 Frontier states  
from Chicago and Los Angeles and the Canadian  
Border to the Rio Grande.

This is Frontier America. The beautiful.

Our Frontier Towns provide the gateways to  
national parks and scenic areas, where the  
only thing in the air is history.  
So blessed Frontier America.  
Come.  
Count your blessings.



**FRONTIER AIRLINES**  
a better way to fly

Arish, a sleepy Sinai town 50 miles from Israel's 1967 border. Egyptian troops would cross the canal to take up positions and "assume national responsibility." After repairs, the canal would be open to the world's ships, including those flying the blue six-pointed Star of David.

**Risk of War.** Sadat has called April "the conclusive month in which all positions will be made clear." Meanwhile, he is waging a persistent diplomatic offensive. Egyptian Foreign Minister Mahmoud Riad has been hopping from Paris to Athens, Teheran and Moscow—and other Egyptians have traveled as far as Djakarta—seeking support for an Egyptian campaign to force Israeli withdrawal from occupied territory. United Nations talks under Jarring's aegis are stalemated. As an alternative, Egypt is considering a request for an emergency session of the U.N. Security Council in which it could propose a measure condemning Israel for not returning territory taken by force. Editor Hassanain Heikal, in his weekly column in Cairo's semiofficial *Al-Ahram* last week, declared that "the international stage is ready for a conclusive movement by us, a decisive stand at the political level."

The Egyptian diplomatic initiative has put Israel on the defensive. Israel has long been unhappy over the Jarring talks, complaining that Jarring has become more a participant than an overseer. "We've ended up negotiating with Jarring and not with the Egyptians," complained an Israeli official last week. Israel would like Jarring to contract what Foreign Minister Abba Eban described as "diplomatic amnesia," whereby he would forget everything that has happened so far in the talks and start new, direct negotiations between Israel and Egypt.

**Israeli Positions.** Last week in Jerusalem, 3,000 delegates to a convention of Israel's governing Labor Party rejected Sadat's Suez proposals. They cheered a resolution calling for eventual postwar borders that would include much of the captured territory that Israel holds. The delegates rejected Washington's proposals that Israel retain only "insubstantial" portions. In the convention keynote address, Premier Golda Meir opposed pressure on Israel to agree to reopening the Suez "within the framework of an enforced political solution inspired by Egypt and the Soviet Union." Israel is, however, willing to enter talks on Suez independent of any discussions about occupied territories. Defense Minister Moshe Dayan said that between the alternatives of total withdrawal and fighting, "we must accept the risk of the renewal of war." At that, Mrs. Meir led the round of applause from the delegates.

Israel's definition of secure borders increasingly irritates Washington as well as Cairo. Mrs. Meir is aware of this. "We are very sorry," she told the Labor Party delegates, "that we are engaged in an argument which may well

grow bitter." Indeed it may. If Egypt is able to summon an emergency Security Council meeting, the U.S. could be faced with an uncomfortable dilemma. As Israel's protector and last remaining major friend, the U.S. would probably veto any censure of Israel that called for a return of all captured territory. Yet this would in effect mean vetoing a policy similar to the "insubstantial changes" position of Secretary of State William Rogers.

**Communist Humbuggery.** The dispute between the U.S. and Israel is growing bitter in other ways. Last week at Yale University, Senate Foreign Relations Chairman J. William Fulbright delivered a severe criticism of Israel's intransigence. By constantly reminding Washington about Soviet aid to Egypt, said Fulbright, Israel was resorting to "Communist-baiting humbuggery" in an attempt to "manipulate U.S. Middle East policy." The U.S., Fulbright went on, is "highly susceptible" to hints of Communist danger, "rather like a drug addict—and the world is full of ideological pushers."

For once, Fulbright's views pretty well coincided with those of the State Department.

## MEXICO

### Troubles on the Via Pacifica

Political one-upmanship in Mexico frequently comes in the guise of a comic book. All factions can and do compete to produce the cleverest and most convincing interpretation of national events. Last week a new comic hit the stands. On the cover was Miss Liberty in all her Grecian-gowned glory, about to be done in by sinister men armed with rifles and long Turkish knives. Were those the Russian and North Korean flags over their heads? They most certainly were. This unabashedly patriotic comic, the handiwork of a wealthy, middle-aged illustrator named José G. Cruz, spins out in cartoons, photographs and cryptic dialogue what many Mexicans are talking about these days: the arrest of 20 young Mexican revolutionaries who traveled to North Korea for guerrilla training and returned home to cause the severest strain in Mexican-Soviet relations since Leon Trotsky sought asylum in Mexico in 1937.

**2 de Octubre.** Even without the comic embellishments, which probably exaggerate the Soviet role in the affair, the story is a remarkable account of international intrigue. As pieced together by TIME correspondents from various sources, it all began in the dormitory of Patrice Lumumba People's Friendship University in Moscow. The time was October 1968. Upset by the bloody university riots in Mexico City that month, which claimed at least 34 lives, six Mexican students studying at Lumumba University on Soviet scholarships got together and decided to form a clandestine organization. They named it *Movimiento de Acción Revolucionaria*

(MAR) and called the guerrilla unit the *2 de Octubre*, the date of the massacre. Fabricio Gómez Souza, one of the students, made contact with the North Korean embassy in Moscow and arranged to visit Pyongyang. There he received the North Koreans' assurance that they would give the Mexican students political and military training. Back in Moscow, he was handed \$10,000 by the North Korean embassy to finance the students' travels.

Gómez then returned to Mexico, where he recruited several more aspiring guerrillas. In order to avoid suspicion by Western intelligence agencies, they traveled individually to East Berlin, where they exchanged their Mexican passports for false North Korean passports. They regrouped in Moscow.



MEXICAN COMIC BOOK

The plot was hatched in Moscow.

where they visited for ten days before flying to Pyongyang on a Soviet Aeroflot plane. Next came six months of training in guerrilla tactics, radiotelegraphy, judo and use of weapons. Retracing their steps through Moscow and East Berlin, the youthful firebrands returned to Mexico and, during the next year, with another \$16,000 supplied by North Korea, recruited 40 more like-minded revolutionaries to make similar trips to Pyongyang.

The movement, which only really got off the ground last August, turned out to be short-lived. On Dec. 19, six MAR members allegedly assaulted a bank messenger and snatched a strongbox containing \$84,000 in U.S. currency. The raid put the police on their tracks. The

★ Title reads: *Treason to the Fatherland.*



break in the case finally came when a MAR member named Francisco Parades Ruiz was arrested on a vagrancy charge March 1 and police found a phony passport on him. Under interrogation, Parades Ruiz reportedly informed on the others in exchange for immunity. With his information, police soon arrested 19 more MAR members on a wide variety of charges.

**Soviet Involvement.** The youths readily admitted that they had received guerrilla training in North Korea. "No easy coup d'état was planned," said Gómez, "but a long struggle, guerrilla warfare and armed confrontation." At first, the Mexican government cautiously avoided implicating the Soviet Union and put full blame on the North Koreans with whom Mexico has no diplomatic relations. But when it came to light that no less than 50 Mexicans had crisscrossed the Soviet Union on North Korean passports, the Mexican government reacted angrily, expelling five top-ranking Russian diplomats and recalling its own ambassador from Moscow. Western intelligence said that the diplomats had been directly involved with MAR's activities. As police stepped up the search for 28 other members of the ill-fated movement, the Soviet embassy issued a statement proclaiming its "strict observance of the principle of nonintervention in the acts of each country." But few Mexicans could accept that profession of innocence.

The episode may mean a considerable setback for Soviet foreign policy in Latin America. In the last two decades, Moscow has established diplomatic relations with every South American country except Paraguay, and assiduously cultivated a *Via Pacifica* policy emphasizing cultural exchange programs and trade agreements as a means to peaceful expansion and influence. The first repercussions came from Costa Rica, which postponed negotiations for a Soviet embassy in San José. It would have been the first for the Russians in Central America.

## CHILE

### Mandate for Allende

"We have given the world a lesson," Salvador Allende Gossens declared jubilantly last week. Five months ago Allende became the world's first Marxist head of state to win office through a free election. Last week, in nationwide municipal contests, he won a bigger share of the vote and a fair-sized endorsement of his policies.

Allende's Popular Unity coalition claimed 50.8%. Actually, if void, blank and independent ballots had been included in the total count, the coalition's share of the vote would have amounted to 49.7%. Still, the figure was an impressive increase over the 36.3% Allende received in the 1970 presidential elections. The Chilean Communist Party, which is closely aligned with the Soviet Union, increased its vote only slightly—from 15.9% of the total last year to 17.3% this time. The big winner was Allende's Socialist Party, which stresses its independent Chilean character. The Socialists nearly doubled their share to 22.8%, replacing the Communists as the strongest element within the Popular Unity coalition. The only loser among the three main partners in the ruling coalition was the relatively moderate Radical Party, whose vote dropped from last year's 13% to 8.1%. The conservative National Party's strength dropped sharply to 18.5%. But despite the continuing movement to the left in Chilean politics, the most popular single party in the country remained former President Eduardo Frei's Christian Democrats, who polled 3% more of the vote than President Allende's Socialists.

**No Arrogance.** The results obviously strengthened Allende, who had said earlier that he would have been content with 43% of the vote. But it was unlikely that the outcome would cause him to increase the tempo of his reform program. He does not have a majority in Congress, where the opposition, notably Christian Democrats, can still block his program. Under the constitution he could call a plebiscite to give

him the power to dissolve Congress and replace it with a unicameral legislature in which his position would be stronger. But the roughly 50% of the vote he won in the municipal elections is not enough to assure that he would win such a plebiscite. Allende insisted last week that he had no intentions of trying it. "I expect that the Congress will meditate on the popular verdict," he said. "I expect cooperation. We are not going to become arrogant with the victory we have obtained."

**Inflation Threat.** The most important legislation before the Congress at the moment is a proposed constitutional amendment that would give Allende the power to complete nationalization of the all-important copper industry. Allende has already nationalized the coal, steel and nitrate industries, as well as two of the largest textile plants and 60% of the nation's banking. The cement industry may well be next.

But copper nationalization will have the most serious effect on the Chilean economy and on Allende's relations with the U.S., since three U.S. companies (Anaconda, Kennecott and Cerro Corp.) own the bulk of the remaining foreign interest in Chile's copper mines. Allende has also expropriated 350 *latifundios* (large estates), with a total of 2,593,000 acres. Although very few landless families have been relocated thus far, he likes to boast that "in five months we have done one-third of what the previous government did in six years."

The cost of Allende's revolution has proved higher than many of his countrymen yet realize. So far, direct controls have checked Chile's chronic inflation, which last year galloped away at the rate of 34.9%. The controls have crippled Chilean businessmen by forcing them to hold down prices while having to pay higher taxes and higher wages to employees. Allende has granted cost-of-living increases ranging from 34.9% for public employees to 47% for private workers. The government's policies have also laid the foundation for renewed inflation by increasing the money supply 55.2% during 1970 and 34.7%



SALVADOR ALLENDE  
A warning against roadblocks.



DANCERS AT SOCIALIST PARTY RALLY IN SANTIAGO



## At Hertz, the old-timers remember when people were ashamed of renting a car.



**B**ACK in the early days of car renting John Hertz and his company had to wrestle with many problems.

One of the biggest was the way people felt about renting cars.

To rent a car, they thought, showed the world they were too poor to own one.

It made them feel small, cheap, second-rate.

This shame of renting cars began to manifest itself in strange ways.

For instance, it was not uncommon for people to walk into Hertz offices wearing disguises.

It got so bad the very concept of renting cars seemed in jeopardy.

Nobody liked us.

And to hear the old-timers tell it, this was John Hertz's finest hour.

He emerged from his office

one day, bleary and unshaven. "Rent them cars they'll be proud to drive," he nearly screamed. "Make them feel important."

Needless to say, his strategy worked.

Today Hertz rents more new cars and more kinds of cars than any other rent a car company.

From our new low priced Ford Pintos to our Lincoln Continentals and Thunderbirds.

And it's still the object of every Hertz girl in the world to make the traveler feel important.

That's a lesson we learned before most of today's rent a car companies even existed.

And as one old-timer recently put it, "That's what renting cars is all about."



"Rent them cars they'll be proud to drive." JOHN HERTZ

YOU DON'T JUST RENT A CAR · YOU RENT A COMPANY

during the first quarter of this year.

As a result of the deteriorating economic situation, the Chilean escudo has slipped to an exchange rate of more than 40 to the dollar on the black market (v. 14.5 at the official rate). Since December, Chile's foreign reserves have dropped from \$332 million to \$255 million. As foreign technicians have left the country, discipline at the mines has fallen steadily. At the giant El Teniente copper mine, absenteeism has increased from 7% last year to more than 25% in February, while copper production at some mines is running 20% behind last year.

Though he frequently takes a nationalist line, Allende knows that he has nothing to gain by antagonizing the U.S. unnecessarily. He is also acutely concerned about the steady decline in the flow of credits to Chile from the U.S. In recent weeks, accordingly, Allende has sought to offer assurances that his nationalization program is not an act of revenge against the U.S. He has emphasized that Chile will not allow the Soviet Union or any other power to use its territory for military purposes. He is angry over several recent slights by the U.S., including the Nixon Administration's refusal to allow the carrier U.S.S. *Enterprise* to pay a goodwill visit at Valparaiso last February.

**Wary Attitude.** "Don't put up roadblocks for us," Allende told TIME. "The worst thing would be if we were to fail not because we are inept but because artificial roadblocks are put in our way. If that were to happen, the people of Latin America would have no recourse but violence. If so, the day will come—not that I want it to—when no North American will be able to set foot safely in South America. This is the great political responsibility the U.S. has."

Allende stresses his preoccupation with his own country's problems. "I want to be a man of Chile," he says. "We are a small country, but we have national feelings and we will never be at the service of any great power. Chile will never be a base for the U.S. nor China nor Russia and that should be enough for you. Your problems are Russia and China. These are not my problems. My troubles are milk, bread, work."

The Nixon Administration has remained wary of Allende. But last week it became known that Washington is planning a shift that could portend a more relaxed attitude toward the Allende regime. U.S. Ambassador Edward Korry, who Allende felt had opposed him in last year's campaign, will soon be replaced by Nathaniel Davis, 46, a cool-headed career man currently serving as U.S. Ambassador to Guatemala. Though delicate, Davis' new assignment hardly compares with his last one. He went to Guatemala after his predecessor, John Gordon Mein, was gunned down by terrorist killers in the streets of Guatemala City.

## SOVIET UNION

### And Then There Was One

"*Slava, slava [glory, glory]!*" echoed the cheers in Moscow's cavernous Palace of Congresses last week. The words ironically hark back to an anthem of another day that celebrated the power of the czars. As 4,963 Communist Party delegates rose in a standing ovation, General Secretary Leonid Ilyich Brezhnev, 64, clasped his hands together like a prizefighter. The 24th Soviet Party Congress was nearly over, and the outpouring of praise for Brezhnev was by all odds the closest that the Soviet Union has come to the adulation of a single ruler since the collective leadership overthrew Nikita Khrushchev in 1964. In more practical terms of power, Brezhnev also emerged with a tighter hold

on the levers of Soviet authority. As the Congress went through the motions of electing a new Central Committee and Politburo, they chose mainly Brezhnev men.

**Unkind Cut.** By contrast, Premier Alexei Kosygin, who shared equal glory with Brezhnev at the last Party Congress in 1966, was cast in a lesser light, although he remains in a powerful position. In the new order of precedence in the Politburo, which was expanded by four members to 15, Kosygin dropped to No. 3, after aging President Nikolai Podgorny, 68, whose post is largely ceremonial. In an unkind cut for any politician, Kosygin's three-hour speech was carried only in edited excerpts on radio and television. Worse still, as he was speaking, Soviet TV was carrying a rebroadcast of Brezhnev's remarks from the day before.



BREZHNEV ANNOUNCING NEW POLITBURO (AT RIGHT, KOSYGIN)  
Rearranging the pecking order.

It also fell to Kosygin to fill in the dis-

illusioning details of the ninth Five-Year Plan, which Brezhnev had expounded in glowing generalities at the start of the Congress. Where Brezhnev, for instance, had announced a grandiose family-allowance plan for everyone earning less than \$55 a month—which means one-sixth of the population—Kosygin brought the glum news that the plan would not take effect until 1974. Even then, the value of free medical care and education would be added in calculating income. That would considerably reduce the number of Soviet citizens who stand to benefit.

**Metal Eaters.** Similarly, Kosygin's dry statistics stripped much of the gloss from Brezhnev's promise that Russian consumer needs would be "more fully met." It will take until 1975 before 64% of Soviet families have refriger-

ators (compared with 32% today) and 72% have television sets and washing machines. That would be a considerable improvement, even if all goes according to plan—which has not happened in the past. But it still means that four years from now, more than a quarter of all families will still be without such appliances.

Moreover, the vaunted shift of production and resources to consumer goods, proclaimed by Brezhnev, turned out to be more apparent than real. Kosygin's figures revealed that such production is to increase between 44% and 48% over the next five years. But at the same time, the production of heavy industry—the "metal eaters," as Khrushchev used to say—will rise by almost the same amount. A considerable part of heavy-industry output goes to a defense establishment, which is roughly the same size as America's. Since the So-

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Multifilter Kentucky Derby Sweepstakes

I think the winning post position will be number \_\_\_\_\_  
(Note: Horse history of the Kentucky Derby, the highest post position was 22.)

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Mail to: Multifilter Derby Sweepstakes, P.O. Box 14373, Louisville, Kentucky 40214. Be sure to enclose the word Multifilter cut from the top of a plastic Multifilter pack for hand-part in plain block letters the word Multifilter on a 3"x5" blank piece of paper. The offer is available only to people 21 years of age and older. Void where prohibited or regulated by law. NO PURCHASE REQUIRED.

**\$25,000**

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3. Be sure to write your position choice in the lower left-hand corner of the front of the envelope to facilitate the handling.
4. Entries bearing the number of the winning post position qualify for the drawing. If there are not enough qualified entries to award the \$25,000 prize, prizes will be drawn first from those entries which are qualified, and the balance of the prizes will be drawn from all of the entries submitted, without regard to post position. In the history of the Kentucky Derby, the highest post position number has been 22. (See the "History" section of this sweepstakes.)
5. Entries will be selected in random drawings on May 8 by Advertising Distributors of America, an independent judging organization, whose decisions will be binding on all matters concerning this promotion.
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To obtain a list of winners, send a stamped, self-addressed envelope to: Multifilter Winners, P.O. Box 79, New York City, New York 10006.

Two things  
a man must never  
doubt...

One is  
his scotch.

Oh the lyrical Scots! Poetry flows at the mention of scotch whisky. But the point is well taken. You want a scotch you can count on. A scotch that will do you proud. Like Pipers.

Pipers is finer...Pipers tastes better. You can be sure of it. With Pipers there's never any doubt.

Yes, thanks to those poetic Scots...Pipers is the scotch you can ask for proudly, enjoy proudly, and serve proudly.

100 Pipers

It's made proudly.  
Drink it that way.





viet gross national product is only half as large as that of the U.S., the burden of defense is twice as great.

**Elusive Goal.** The real catch, however, came in Kosygin's disclosure that 95% of the increase in consumer-goods output is expected to come from "increased and more efficient labor production." Labor productivity, which currently averages only half that of U.S. workers, has always been an elusive goal for the Soviet economic planners. At the 1966 Congress, Brezhnev sought to solve the problem by demanding harder work, better discipline and an end to drunkenness. Now the Soviet rulers have dropped such exhortation in favor of incentives—the promise of more consumer goods. But the new incentives, unaccompanied by economic reform, are no more likely to increase productivity than Brezhnev's previous strictures.

The low level of Soviet output is due largely to an overcentralized and hugely inefficient planning system. The most promising Soviet reforms to date were the so-called Libermann reforms of the mid-1960s in which profit and market forces were allowed to play a role in judging the performance of industrial enterprises. At the time, Kosygin endorsed the reforms. In his speech last week, he pronounced the end of such "erroneous conceptions that substitute market regulation for the guiding role of state centralized planning."

**Packed Politburo.** In essence, the 24th Congress endorsed the leadership's present policies, which represented primarily a triumph of the status quo, or of "monolithic unity," as *Pravda* put it. It empowered Brezhnev to "cleanse" the party by expelling members, a device that would enable him to favor his backers. All present Politburo members retained their seats, but their order of seniority was changed, except for Brezhnev and Party Ideologue Mikhail Suslov, who remained No. 4. Dmitry Poliansky (TIME cover, March 29) rose from ninth to eighth position behind Kirill Mazurek, who advanced one step to No. 7. Gennady Voronov, Premier of the Russian Republic, dropped from fifth to tenth place. Aleksandr Shelepin, former head of the KGB secret police, slipped from the seventh to the eleventh spot, a clear-cut downgrading for a man who used to be one of the most powerful individuals in the Soviet Union.

The new men elected to an enlarged Politburo were Viktor Grishin, 57, Moscow party chief; Dinmukhammad Kunayev, 59, Kazakhstan party chief; Vladimir Sheherbitsky, 53, chairman of the council of ministers of the Ukraine, and Fedor Kulakov, 53, a party secretary and specialist in agriculture. All are Brezhnev protégés. By packing the Politburo, as Stalin did in 1952, Brezhnev henceforth will be able to dominate it more easily. The collective leadership, which last year had begun to show signs of strain, appeared to be yielding ground to Brezhnev's drive toward undisputed pre-eminence.

## WEST GERMANY

### Bidding for Adolf

"Here I have a cue card for an early Hitler speech," the auctioneer announced in his nasal Bavarian accent. "The words that Hitler penciled on it repeat the pattern to be followed in his harangue: 'November 1918—Criminals—The Political Situation Today—Our Irrevocable Demands—The Coming Elections—Our Candidates—Our Tactics—The Jews.'" Bidding in the stuffy auction room on Munich's fashionable Maximilianstrasse started briskly. The scruffy cue card was quickly knocked down to a broker acting on behalf of an anonymous British collector. Price: \$545.

Next came Hitler's ostrich-skin wallet, which was stuffed with 37 pictures, two negatives of Eva Braun and a free ticket to a 1927 high school dance in

they were hiding out in a Midlands farmhouse in 1963 recently went for \$120. Even so, the mania for Hitleriana is an especially puzzling phenomenon. In the past year, sales of Third Reich mementos have begun to rise sharply. A few of the collectors are old diarch Nazis like a former SS *Gruppenführer* who has a private museum in his Munich home. But young Germans are turned off by the craze for souvenirs of Adolf. The French put a quick end to the collection of Hitleriana by outlawing the trade in Third Reich relics.

**Peculiar Types.** The largest group of collectors is American. Munich Auctioneer Count Arnhard Klenau von Klenau, who conducted last week's sale, claims to know of at least 200 American collectors. In his Hollywood home, Bob Hope has books with Hitler's name plate, several sheets of Hitler's personal station-



HITLER MEMORABILIA IN MUNICH AUCTION  
Sold: a shopping list and a scruffy little cue card.

Linz, Austria. A broker bought it for a Texas oilman. The price: \$665. An autographed Hitler portrait went for \$670. Hitler's 1927 membership card in an automobile club fetched \$270. An elderly German paid \$130 for a short shopping list (vegetable soup and cognac) that *der Führer* had written out for Munich's famed Dallmayr delicatessen.

**Esoteric Impulses.** All told, the Munich auction last week sold some five dozen Hitler souvenirs, all of them from the estate of the late Anny Winter, who was Hitler's housekeeper from 1929 to 1945. Anny's ardor for collecting just about anything Hitler touched netted her grandnephews a windfall of \$16,400.

Collectors and souvenir hunters have always been inspired by strange and esoteric impulses: A lock of Napoleon's hair, which even Josephine would not have given a sou for, can today fetch upwards of \$200. A frying pan used by Britain's "Great Train Robbers" when

nery and a porcelain dinner plate inscribed "*Kanzlei des Führers*" (Führer's Chancellery), which Hope acquired while entertaining troops in Germany in 1945, The West Point archives, says the count, are also searching for relics. "Though I personally know only a very small portion of our regular customers," adds Klenau, "I'm convinced that they are not collecting for political reasons. I look at them as affluent, elderly, admittedly somewhat peculiar types who have an urge to get close to history."

West German Psychologist Julia Mueller, author of a book on German youth problems, disagrees. "The main reason for the attraction seems to me to be the almost inconceivable obscenity with which the Nazis did everything," says she. "This, in an age where pornography has become emasculated by overexposure, may offer itself as a quite successful substitute for the feelings pornography aimed to arouse."

## PEOPLE

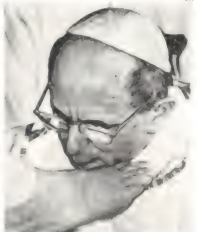
Other maestros may prepare for a major performance by going over the score in solitude. Not Austria's white-manned Conductor **Herbert von Karajan**, 63—flyer, skier, yachtsman and fast-car buff. A few hours before the premiere of a Karajan-produced, Karajan-directed, Karajan-conducted *Fidelio* at Salzburg's Easter festival, he climbed into his souped-up Ford GT 40 and took on a twisting mountain road at speed. When he whined around a curve to face a juggernaut diesel on the wrong side of the road, Karajan took evasive action, turned the Ford over twice and totaled it. Unscathed and cucumber cool, he unsnapped his seat belt and phoned from a farmhouse for his chauffeur to bring the Rolls. After the *Fidelio* that night—a smash success, of course—he called his dealer to order another souped-up GT 40.

"I got a mommy down here. I might not come back if she wasn't here." But while he was down there in Beaufort, S.C., World Heavyweight Champion **Joe Frazier** consented to address the state legislature in Columbia—one of the few black men to do so since Reconstruction days. "We must save our people," he told the packed chamber. "And when I say 'our people,' I mean white and black. We need to quit thinking who's living next door, and who's driving a big car, who your child is playing with, and who your child is sitting next to in school. We don't have time for that."

"One million women have an abortion every year in France. I declare that I am one of them." Who? Actresses **Catherine Deneuve**, **Jeanne Moreau** and **Micheline Presle**, Writers **Françoise Sagan** and **Simone de Beauvoir**—plus 338 other Frenchwomen who signed a statement that was published

in a Paris weekly last week favoring legalized abortion. The admission made each one of them liable to a fine of up to \$1,300 and six months to two years in jail, though most women who are apprehended get suspended sentences. One of the few female headlines whose names were missing was **Brigitte Bardot**. Was it possible that she had not had what **Simone de Beauvoir** had? "For intimate personal reasons, Brigitte didn't wish to sign the petition," explained one of the fetal-freedom fighters. "But she offered us her financial backing."

**Pope Paul VI** has strong feelings about priests who have asked to be relieved of their vows. So strong, in fact, that last week he put them in one of the bitterest possible Christian contexts. In his



POPE AT CEREMONY  
A shiver.

Holy Thursday sermon, before performing the traditional foot-washing ceremony at the Cathedral of St. John Lateran, the Pope harked back to the presence of the traitor Judas at the Last Supper and asked: "Who cannot but feel a shiver in his heart at the grave and terrible comment of Jesus: 'It were better for that man if he had not been born.' I cannot think of that tragic Easter drama," he went on, "without associating it in my mind, as bishop and pastor, with thoughts of the abandonment, of the flight of so many brethren in the priesthood." His voice shaking, the Pontiff castigated the "vile earthly reasons" many had for leaving the priesthood and asked the congregation to pray "for those runaway brethren and for the communities they deserted and scandalized."

With a toot and a screech and a cloud of steam, **Earl Mountbatten of Burma**, Britain's Admiral of the Fleet and India's final Viceroy, realized a childhood ambition. He drove a real



MOUNTBATTEN AT THE THROTTLE  
A toot.

choo-choo train. Almost real, anyway. It was a miniature replica of the famed *Royal Scot*, and the track on the Yorkshire estate of his friend, **Robin Compston**, landowner and miniature-railway buff, was only half a mile long. But it was a lark ride while it lasted, and Mountbatten inaugurated the new rail service with a paraphrase of the traditional naval christening: "May God bless this train and all who rail in her."

The squeaky-clean image of Singer-Actor **Pat Boone** is no stage illusion; he is an all-out, 24-hour-a-day Christian and a dedicated drum beater for the growing "Jesus movement" among the young. All the more surprising, then, that Pat and Wife Shirley have just been dropped by the fundamentalist "Churches of Christ. The reason: they have been practicing faith healing and glossolalia, the "speaking in tongues" that is mentioned in the biblical account of Pentecost and in Paul's first letter to the Corinthians. Boone, who has been personally baptized about 100 Christians in his heated Beverly Hills swimming pool, does not know where he and Shirley will end up, denomination-wise. "Since the word sort of got out that we had been disfellowshipped," he says, emissaries from the Mormon Church have been around at least ten times, and there have also been invitations from the Methodists and the Assemblies of God.

"There are certain things I will not do," Britain's **Princess Anne** told an interviewer. Such as? "Wearing hot pants. People complain one isn't with it, but honestly they are the absolute limit." Anne was equally forthright about one of her ambitions—riding in the Olympics—and her relations with Brother **Charles**, the Prince of Wales. "We live in the same house but have rooms at opposite ends of a corridor," she said. About the only time she sees him is during the school holidays of their younger brothers, **Princes Edward and Andrew**—"and that's enough, roughly speaking."



DENEUVE AT EASE  
A declaration.



# The life of an I.W. Harper bottle.

With Henry, the man behind the bar: dispenser of drinks, referee, holder of stakes, observer of man, and sympathetic ear.



The night got off to a slow start. Then some oil company brass from Dallas came in. I poured three Harper's.

Two guys stopped off before their long ride home. Started to argue about the Long Island Railroad. Finally cooled 'em off with two over ice.

Then the classy-looking advertising lady dropped by with her crowd. Took a table in the corner. They were all business.

In came one of the top Park Avenue psychiatrists. Told me his troubles. Called me "the analyst's analyst."

Harper and soda for a well-known drama critic. Said he couldn't sit through the last act. Somebody's going to get roasted tomorrow.



This one's for Henry.



For nearly a hundred years, I.W. Harper has been winning medals all over the world—the reason it's known as the Gold Medal Bourbon, the finest Kentucky bourbon you can buy.

## Sometimes the bourbon has to be this good.

80 PROOF KENTUCKY STRAIGHT BOURBON WHISKEY • © I.W. HARPER DISTILLING CO., LOUISVILLE, KENTUCKY

# The smoothest Impala ever has the longest wheelbase ever.



You've changed.

We know. In-depth research and good old common sense told us you'd be determined to get more car for your money than ever before.

So we've changed in response to you.

We've brought you more Impala than ever before. A totally new one for 1971. And we've given it a ride that eclipses even last year's for comfort.

That's thanks to our longest wheelbase ever. 121.5 soothing inches of it.

And thanks to our new chassis.

Wider. Steadier.

And our new suspension. Smoother. Quieter.

But you'd like all the peace of mind and quiet you can get, too.

Right?

You've got it.

With Impala's standard power disc brakes for steady, even stops.

With its new roof, which puts *two* welded steel roof-panels over your head. Stronger. Quieter.

With its new windshield. For improved visibility.

And with its new power ventilation system that turns on when the car does. It pulls fresh air in, through,

and back out again.

Even standing still, with

the windows rolled up.

'71 Impala. A lot of

good changes. For one

good reason.

You've changed.



## 1971. You've changed. We've changed.

# MAN INTO SUPERMAN

## The Promise and Peril of the New Genetics

*Reshaping life! People who can say that have never understood a thing about life—they have never felt its breath, its heartbeat—however much they have seen or done. They look on it as a lump of raw material that needs to be processed by them, to be ennobled by their touch. But life is never a material, a substance to be molded. If you want to know, life is the principle of self-renewal, it is constantly renewing and remaking and changing and transfiguring itself.*

—Doctor Zhivago by Boris Pasternak

Perhaps it was simply a matter of chance, a random throw of the molecular dice. Perhaps some greater, transcendent force was at work in the earth's primeval seas. Yet from the moment of its miraculous genesis three billion years ago, life has been continually renewing and remaking itself, an evolutionary process that has led to the appearance of a unique creature quite unlike any of those before him. Thinking, feeling, striving, man is what Pierre Teilhard de Chardin called "the ascending arrow of the great biological synthesis."

Now, only some 35,000 years after the birth of modern man—a brief interval on the evolutionary time scale—the arrow is pointing in a dramatic new direction. Not only has man begun to unlock the most fundamental life processes, but he may soon be able to manipulate and alter them—curing such killer diseases as cancer, correcting the genetic defects that account for perhaps 50% of all human ailments, lessening the ravages of old age, expanding the prowess of his mind and body. Says Caltech's Robert Sinshemer, one of the architects of the biological revolution: "For the first time in all time, a living creature understands its origin and can undertake to design its future."

To an extent, man has already altered himself and his planet. Scientists can only guess at the genetic toll from radioactive fallout, chemical contamination and other assaults on the environment. Even man's noblest impulses are apt to offend against nature. While improved medical cure assures the survival and reproduction of those with genetically caused mental and physical

defects, it also ensures that an increasingly larger percentage of the population will be heir to these illnesses in years to come. Geneticist Theodosius Dobzhansky succinctly expresses the ethical dilemma: "If we enable the weak

and the deformed to live and to propagate their kind," he says, "we face the prospect of a genetic twilight. But if we let them die or suffer when we can save or help them, we face the certainty of a moral twilight."

The biological revolution could make some of the choices easier. In the future, defective genes may be excised by pinpoint laser beams and replaced by viruses acting as man's genetic messengers in the body. Anguished man may also find his mental burdens lightened, as he turns to anti-aggression and knowledge pills, or learns to stimulate his brain's pleasure centers with electrodes.



THE WALKER BY WILHELM VON GLUCKENBACH

ARTIST ERNST TROVA'S "WALKING MAN"

A pact with dark forces.

### BUT OTHER ADVANCES

may only increase man's moral agony. By growing life in artificial wombs, for instance, or even rearranging enough molecules to create life itself, man will invoke comparison to the legendary Faust. He attained the power to create life—the tiny test-tube man, or homunculus—but only after he had bartered away his soul to the devil. If the new knowledge is used recklessly, Faustian man of the future may wonder if he, too, has not made a pact with dark forces.

In the long history of evolution, 100 million species of plants and animals have inhabited the earth.

Of these, 98% are now extinct, unable to survive the challenges of a changing environment. Man himself may face such a life-and-death test. Unlike his predecessors on the evolutionary ladder, he has the capability to meet it—and to fail it even more grandiosely than did creatures with lesser brains and imaginations.

Astonishingly, this capacity has been acquired only recently with remarkable advances in the life sciences. On the following pages, TIME describes the advances, including their promises and dangers. Some are distant, others close at hand. Together they may eventually shape *Homo futurus*, a creature resembling the Superman of the Nietzschean and Shavian dream—or at least one whose powers will be dramatically different from contemporary man's.

# THE CELL: Unraveling the Double Helix and the Secret of Life

Wildly excited, two men dashed out of a side door of Cambridge University's Cavendish Laboratory, cut across Free School Lane and ducked into the Eagle, a pub where generations of Cambridge scientists have met to gossip about experiments and celebrate triumphs. Over drinks, James D. Watson, then 24, and Francis Crick, 36, talked excitedly, Crick's booming voice damping out conversations among other Eagle patrons. When friends stopped to ask what the commotion was all about, Crick did not mince words. "We," he announced exultantly, "have discovered the secret of life!"

cipline, man could at last explore—and understand—living things at their most fundamental level: that of their atoms and molecules. Once molecular biology was sardonically defined as "the practice of biochemistry without a license." Now it has become one of science's most active, exciting and productive arenas, taking the limelight (and some of the best talent) from that longtime favorite, nuclear physics.

Using laboratory skills that were unheard of a generation ago, scientists have isolated, put together and manipulating genes, and have come close to creating life itself. In 1967 Stanford Uni-

versity's Arthur Kornberg synthesized in a test tube a single strand of DNA that was actually able to make a duplicate of itself. Kornberg's "creation" was only a copy of a virus, a coated bit of genetic material that occupies a twilight zone between the living and inanimate. But many scientists have become convinced that they may eventually be able to create functioning, living cells.

Molecular biology, in part, is rooted in the science of genetics. Ever since Cro-Magnon man, parents have probably wondered why their children resemble them. But not until an obscure Austrian monk named Gregor Mendel began planting peas in his monastery's garden in the mid-19th century were the universal laws of heredity worked out. By tallying up the variations in the offspring peas, Mendel determined that traits are passed from generation to generation with mathematical precision in small, separate packets, which subsequently became known as genes (from the Greek word for race).

Mendel's ideas were so unorthodox that they were ignored for 35 years. But by the time the Mendelian concept was rediscovered at the turn of the century, scientists were better prepared for it. They already suspected that genetic information was hidden inside pairs of tiny, threadlike strands in cell nuclei called chromosomes, or colored bodies (for their ability to pick up dyes). During cell division they always split lengthwise, thereby giving each daughter cell a full share of what was presumed to be hereditary material.

A few years later, the suspicions were dramatically confirmed by the pioneering geneticist Thomas Hunt Morgan in

Columbia University's famed "Fly Room." Through ingenious crossbreeding experiments with the fruit fly *Drosophila melanogaster*, Morgan and his students were able to map the relative positions of the genes along the insect's four pairs of chromosomes. Still, the gene's physical nature remained as great a mystery as ever. DNA had been discovered in the nuclei of cells by the Swiss biochemist Friedrich Miescher a few years after Mendel did his work on peas. But since the chromosomes in which the DNA was found also contained proteins—the basic building blocks of life—few scientists had any inkling that DNA might be playing an even more central role to life.

By the 1940s, however, the molecular biologists had come on the scene; and they insisted that fundamental life processes could be fully understood only on the molecular level. In their investigations, some used the electron microscope, which revealed details of structure invisible to ordinary optical instruments. Others specialized in X-ray crystallography, a technique for deducing a crystallized molecule's structure by taking X-ray photographs of it from different angles. Physicist Max Delbrück turned to nature for his investigative tools: bacteriophages (literally, "bacteria eaters"), tiny parasitic viruses that invade their host bacteria and rob them of their genetic heritage.

## BUT THE HONORS

for making the breakthrough discovery went to a traditional bacteriologist. Taking purified DNA extracted from the chromosomes of dead pneumonia bacteria, Rockefeller Institute's Oswald T. Avery and his associates showed that it could transform other, normally harmless bacteria into virulent ones. The experiment indicated that it was DNA, and not protein, that carried the genetic message. So unexpected was that finding that even Avery was at first unwilling to accept it. Eight years later, Alfred Hershey and his assistant Martha Chase demonstrated that a virus' DNA could, by taking over a bacterium, also nullify the cell's genetic instructions and replace them with its own. Only then was DNA finally accepted as the magic substance of the genes.

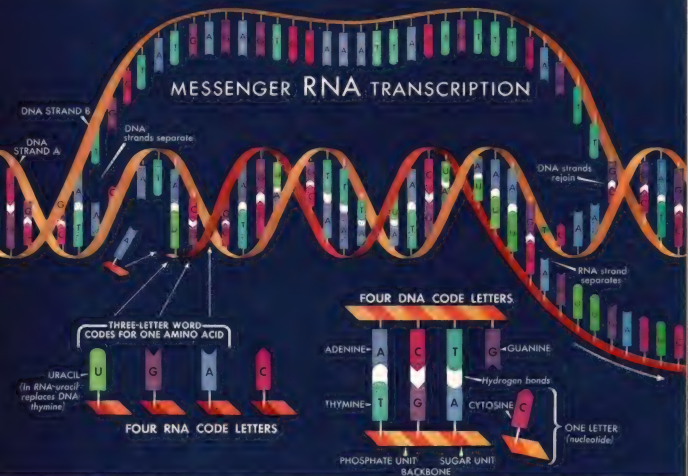
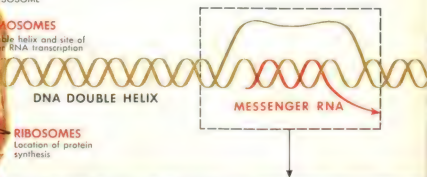
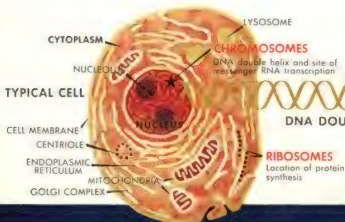
Inspired by these experiments, Watson, then a young Ph.D. in biology from Indiana University, decided to take a crack at the complex structure of DNA itself. The same thought struck Crick, a physicist turned biologist who was preparing for his doctorate at Cambridge. Neither man was particularly well equipped to undertake a task so formidable that it had stymied one of the world's most celebrated chemists, Linus Pauling. Watson, for his part, was deficient in chemistry, crystallography and mathematics. Crick, on the other hand,



WATSON & CRICK WITH DNA MODEL AT CAMBRIDGE (1953)  
Mysteries of the master molecule.

Brave words—and in a sense, incredibly true. On that late winter day in 1953, the two unknown scientists had finally worked out the double-helical shape of deoxyribonucleic acid, or DNA. In DNA's famed spiral-staircase structure are hidden the mysteries of heredity, of growth, of disease and aging—and in higher creatures like man, perhaps intelligence and memory. As the basic ingredient of the genes in the cells of all living organisms, DNA is truly the master molecule of life.

The unraveling of the DNA double helix was one of the great events in science, comparable to the splitting of the atom or the publication of Darwin's *Origin of Species*. It also marked the maturation of a bold new science: molecular biology. Under this probing dis-



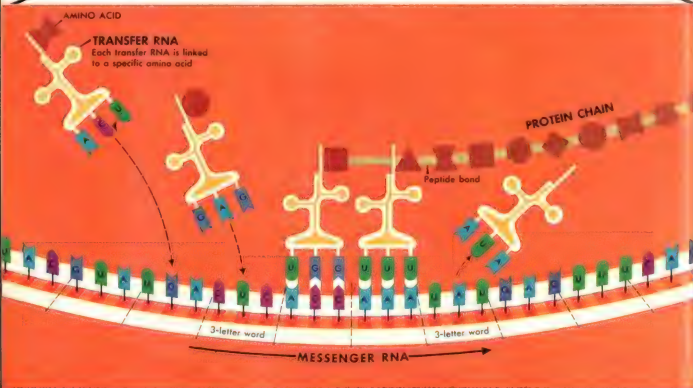
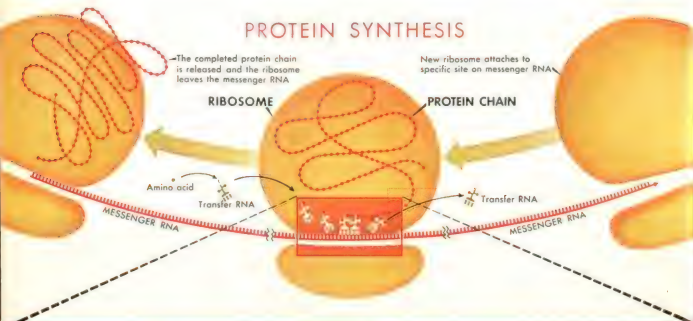
The master molecule DNA passes hereditary information from one generation to the next and directs the manufacture of proteins, life's most important building blocks. Shaped like a spiral staircase, it spells out its vital messages in a complex code. Each of the steps that join DNA's twin spirals consists of two complementary chemical bases, each base-strand unit forming a nucleotide or single letter in the genetic code; three letters make up a "word." When the

human body requires a certain protein, that need is communicated to the cells that manufacture it. In their nuclei, a molecule called an enzyme unwinds and separates the section, or gene, of the DNA molecule that contains the coded instructions for making the protein. As the DNA strands unwind, their paired nucleotide links come apart. Other nucleotides floating freely in the cell fluid quickly attach themselves to complementary nucleotides on one of the

(continued on overleaf)



# PROTEIN SYNTHESIS



DNA strands and form a single-stranded molecule of messenger RNA. This molecule, imprinted with the DNA's message, then detaches itself and leaves the nucleus. The open section of the DNA molecule then rewinds.

After leaving the nucleus, the messenger RNA is picked up by a ribosome, which runs the RNA strand through itself like tape through a playback machine. It then reads off the messenger RNA's three-letter words—each of which names a specific amino acid necessary to form the protein molecule. As each word is read, another type of RNA, called transfer RNA, plucks the

appropriate amino acid from the cell fluid and arrives at the scene, carrying the acid at one end and three appropriate nucleotides at the other. These nucleotides are drawn to their complementary partners on the messenger RNA strand. Thus, the amino acids are brought to the ribosome in the proper sequence to form a long protein chain. When completed, the chain is released into the cytoplasm, where it organizes itself into a three-dimensional protein molecule. Meanwhile, the free end of the messenger RNA is picked up by another ribosome for the assembly of still another protein molecule.

## The New Genetics

was almost totally ignorant of genetics. But together, in less than two years of work at Cambridge, these two spirited young scientists showed how it is possible to win a Nobel Prize without really trying.

In 1968 Watson himself produced a highly irreverent, gossipy bestseller, *The Double Helix*, which revealed the human story behind the discovery of DNA's structure: the bickering, the academic rivalries, even the deceptions that were practiced to win the great prize. Out of Pauling's earlier work, Watson and Crick got the idea that the extremely long and complicated DNA molecule might take the shape of a helix, or spiral. From the X-ray crystallography laboratory at King's College in London, where Biochemist Maurice Wilkins was also investigating the molecule's structure, they quietly obtained unpublished X-ray data on DNA. Relying as much on luck as logic, they constructed Tinkertoy-like molecular models out of wire and other metal parts. To everyone's astonishment, they suddenly produced a DNA model that not only satisfied the crystallographic evidence but also conformed to the chemical rules for fitting its many atoms together.



### OUT OF THE

architecture of their precisely constructed double helix emerged the secret of DNA's awesome powers. The banisters of the staircase were fashioned of long links of sugars and phosphates; the steps between them were made of pairs of chemicals called bases, weakly joined at the center by hydrogen atoms. Only four different bases were used—adenine (A), thymine (T), cytosine (C) and guanine (G). But their sequence could vary so widely along the length of the staircase that they made up an almost limitless information-storage system, like the memory bank of a computer. In addition, because the bases were chemically complementary—that is, A paired off only with T, and C only with G—one side of the staircase was in effect a genetic mirror image of the other. Watson and Crick quickly recognized from the structure of their model how DNA worked. But their 900-word announcement in *Nature*, the international weekly published in Britain, concluded with one of the more coy statements in scientific literature. "It has not escaped our notice," they said, "that the specific pairing we have postulated immediately suggests a possible copying mechanism for the genetic material."

In a second letter, they described that mechanism: how the DNA molecule unwinds and unzips itself right down the middle during cell division, its base pairs breaking apart at their hydrogen bonds. Then by drawing on the free-floating material surrounding them in the nucleus of the cell, the two sep-

SPY



ALLFREY

J.R. EVERHAM



DELBRÜCK

SY FRIEDMAN—GODICK



SPIEGELMAN

### Probing the process of cell differentiation.

arated strands link up with complementary base-and-strand units along their entire length, forming two exact copies of the original double helix. Thus DNA faithfully passes its genetic information on to new cells and to future generations.

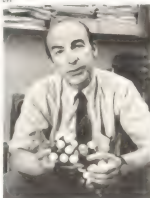
Ingenious as the theory was, scientists still demanded proof that the molecule actually replicated itself. That proof was quick to come. By 1956, Arthur Kornberg, then at Washington University in St. Louis, discovered an enzyme, or natural chemical catalyst (which he named "DNA polymerase") that was apparently critical to some of the activities of the double helix. Once he obtained enough of the enzyme, he placed it in a test-tube brew with a bit of natural DNA, one of whose strands was incomplete, the four bases (A, T, C, G) and a few other off-the-shelf chemicals. True to his expectations—and the Watson-Crick theory—the incomplete segment picked up its complementary nucleotides from the brew to form a complete double helix.

Implicit in the Watson-Crick model were the workings of DNA's other es-

sential function: how it orders the production of proteins. These are also long and twisted helical molecules, but they are the actual building blocks rather than the genetic blueprints for living things. As such, proteins are immensely varied; there are many thousands of different kinds in the human body alone. The distinctive proteins that make up the cells of the eye, for example, differ from those of the kidneys or muscles. Despite their variety, however, all proteins are built from some of only 20 smaller and simpler molecules, called amino acids. How then, scientists asked themselves, did the isolated double helix, locked in the nucleus of the cell, direct the assembly of amino acids into protein in other parts of the cell?

Scientists suspected that DNA had a helper, a single-stranded chemical first cousin called ribonucleic acid (RNA). Most of the cell's RNA is found in ribosomes. These are globular bodies in the material outside the cell's nucleus that seem to be highly active centers of protein synthesis. But if this ribosomal RNA played a role in protein making, how did it obtain and execute the

SPY



KORNBERG



NIRENBERG



PAULING

### Stealing the limelight from a longtime favorite.

instructions from the master molecule DNA inside the nucleus?

In 1955, after wrestling with the question, Francis Crick postulated (and Harvard Biochemists Paul Zamecnik and Mahlon Hoagland confirmed) a second form of RNA, which was later found to carry specific amino acids floating in the cytoplasm to the ribosomes; this substance became known as transfer RNA. Then in the early 1960s, biologists discovered a third kind of RNA—shortly after its existence had been theorized by Jacques Monod and François Jacob of France's Pasteur Institute. Called messenger RNA, it provided the missing piece in the molecular puzzle. It was formed on an uncoiled strip of DNA in the nucleus, imprinted with the particular "message" encoded in that portion—or gene—of the staircase, and then sent off with these instructions to the protein-making ribosomes.

Neat as it was, this scheme still left unanswered one more question: How could DNA or RNA choose from among 20 amino acids to produce complex proteins by using an informational system that had only four code letters—the four bases—at its disposal? An answer to this intriguing problem was suggested by Physicist George Gamow, who likened the four bases to the different suits in a deck of playing cards.

If the cards are dealt one at a time, disregarding the order of the cards within the suits, the player encounters only one of four possibilities on each draw (a heart, diamond, spade or club); clearly, if DNA's code worked this way, there would not be enough choices to encode 20 amino acids. If the cards are dealt in pairs, the number of combinations increases to 16 (since each card may combine with its own kind or one of three other suits). But such a two-unit system also would be inadequate. So Gamow reasoned that DNA's four bases had to be taken at least three at a time: this would yield 64 possible combinations ( $4 \times 4 \times 4$ ), more than enough to code for the existing amino acids.

**I**N 1961, CRICK'S team at Cambridge proved Gamow's ingenious "triplet" theory. They demonstrated that RNA formed from only one or two base units could not effect the manufacture of proteins. But when they added a third base unit, protein formation began immediately. It remained, however, for an unknown young biochemist named Marshall Nirenberg, at the National Institutes of Health, to crack the code itself. That same year Nirenberg had succeeded in building up short, synthetic strands of RNA out of only one type of base. Invariably, this artificial RNA induced the manufacture of chains of proteins consisting of only

one type of amino acid, phenylalanine. The conclusion was inescapable: in the genetic code, Nirenberg's triplet had to signify phenylalanine.

Using this clue as their Rosetta stone, Nirenberg and other researchers eventually found one or more three-letter code words, or codons, that could call up every single amino acid—plus other words that acted as punctuation, marking the start or completion of a message ordering the production of a protein. Even more remarkable, they learned that the code was universal: the same four letters, taken three at a time to form a single genetic word, code the same amino acids in all living things. Thus by the mid-1960s, scientists finally understood how DNA passes on genetic information with exquisite precision, and the way it orders up the fabrication of new cellular protein.



LUNGFISH (TOP) & SALAMANDER  
More richly endowed than man?

That process, shown in the accompanying color chart, was summarized by Crick in a series of rules that became known as the Central Dogma. Most scientists interpreted the key rule of that dogma to be that genetic information flowed in one direction: from DNA to RNA to protein. To the surprise of many molecular biologists, however, it has recently been shown that part of the process can sometimes be reversed. This finding, in the opinion of molecular biologists like Columbia's Sol Spiegelman, may offer an important clue to the workings of cancer cells (see box, page 44).

DNA is as complex as the system it directs. Even after two decades of in-

tensive study only about one-third of the genes have been mapped along the length of DNA in the chromosome of so elementary a creature as the digestive-tract bacterium *Escherichia coli*. The reason: just a teaspoon of *E. coli* DNA has information capacity approximately equal to that of a computer with a storage capacity of about 100 cu. mi.

**M**AN, FOR HIS PART, is even more generously endowed—with 1,000 times as much DNA as one *E. coli* in each of his reproductive cells.

Even so, the cells of such relatively primitive animals as salamanders, lungfish and even certain one-celled algae contain far more DNA than man's. Does this mean that such lowly beasts have a richer genetic capacity than man?

The Carnegie Institution's Roy Britten and David Kohne, after much painstaking investigation, may have found the answer to that embarrassing question. A few years ago they discovered that in the DNA of higher organisms many genes seem to be repeated. In calf cells, they calculated, up to 40% of the DNA consists of segments that are repeated as many as 100,000 times apiece. As a result of

this work, some scientists are now convinced that in this seeming redundancy of genes, rather than in the total number, lies the secret of the genetic sophistication of higher organisms.

How would such genetic repetition help man? Some theorists suspect that the "spare" DNA plays a regulatory role, perhaps switching other genes on and off at just the right moment during the involved process of protein manufacturing. Harvard Biochemist Charles Thomas, however, supports a more radical idea. He thinks that the repeated segments are actually "slaves" of a "master" gene from which they have been copied. Working in tandem, explains Thomas, such "slaves" could produce proteins more quickly and efficiently—though, he admits, not necessarily in greater diversity.

Molecular biologists are also probing ever more deeply into the process of cell differentiation. It has long been known that the DNA in every body cell of an individual organism is identical; this DNA contains all the information necessary to construct the whole organism. Why then, in a human being, for example, is a liver cell so different from a hair cell, a heart cell so different from a skin cell? The answer, Jacob and Monod theorized in 1961, is that only a small percentage of the genes in any cell are giving instructions

for the operation of that particular cell. The rest are "turned off" by protein repressors, which wrap themselves around long stretches of DNA and prevent them from transferring their coded information to messenger RNA.

A number of such repressors have since been found in bacteria. Scientists have also isolated enzymes that turn the genes back on. These inducers, as they are called, work by unlocking the repressors on the segment of DNA. But even in *E. coli*, such switching can become bafflingly difficult: the repressors and inducers, for example, require controlling enzymes of their own. These enzymes, in turn, apparently need the help of still other molecules, such as the recently discovered sigma, rho and psi factors, in recognizing the appropriate genes. In fact, it is because of the very complexity of these processes that leading molecular biologists like Crick find the questions arising from cell differentiation so fascinating. How in the human embryo, for instance, are certain genes switched on so that by the end of the first week after conception identical cells have begun to grow into cells with differing characteristics?

**S**O FAR THESE fundamental questions are largely unanswerable, although some clues have been uncovered. For one thing, it is thought that in higher, multicellular forms of life, repressors may be a special class of proteins called histones; these are not found in bacteria. When histones are removed, Rockefeller University's Vincent Allfrey has found, RNA production soars by 400%, evidence that formerly repressed segments of DNA have become active. In addition, it has been learned that the cell membrane itself appears to play a crucial part in switching genes on and off. When a membrane is merely brushed by certain hormones—a large class of molecules that serve as intercellular messengers—the membrane will respond as though jolted by an electric probe. It will instantly send off a signal to the nucleus, triggering RNA production by the genes. That finding could eventually have medical application for diseases—like diabetes—resulting from vital genes that are inexplicably turned off.

Many more puzzles remain unsolved. Why are there small bits of DNA located outside the nucleus in energy-producing cell centers called mitochondria? Does this mean that there are other, unknown repositories of hereditary information? In spite of such questions and complications, the basic structure of DNA postulated by Crick and Watson 18 years ago has withstood the test of time remarkably well. More important, it has given man a profound new understanding of basic life processes—and the means to control and alter them.

## THE BODY: From Baby Hatcheries To "Xeroxing" Human Beings

The remarkable advances in molecular biology during the past two decades have given man an understanding of the basic processes that shape his life and have placed within the realm of possibility medical achievements undreamed of a scant few years ago. As more and more of the once-mysterious life forces within the cell are defined in the logical language of chemistry, the way is being opened not only for permanent cures of genetic diseases but also for drastic changes in man's genetic makeup. The acquisition of the power to eliminate genetic imperfections and engineer entirely new characteristics for humans is, for all of its promise, a frightening prospect for those who be-

Fully 25% of all conceptions fail to reach an age at which they can survive outside the womb, and of these, at least a third have identifiable chromosomal abnormalities. Still, as many as five out of every 100 babies born have some genetic defect, and Nobel-Prizewinning Geneticist Joshua Lederberg believes the proportion would be even higher were it not for nature's own process of quality control.

The most obvious deformities result from chromosomal abnormalities. Down's syndrome, or mongolism, which occurs once in every 600 births, is caused when one set of chromosomes occurs as a triplet rather than a pair. Hydrocephalus, or water on the brain, and polydactyly, the presence of extra fingers or toes, also result from faulty genes.

But the majority of genetic stigmas have somewhat more subtle symptoms and occur when defective genes fail to order the production of essential enzymes that trigger the body's biochemical reactions. Phenylketonuria (PKU) is caused by the absence of the enzyme necessary for the metabolism of the amino acid phenylalanine; as a result, toxins accumulate in the body and eventually cause convulsions and brain damage. Cystic fibrosis, which causes abnormal secretion by certain glands and respiratory-tract blockage that can lead to death by pneumonia, is the most common inborn error of metabolism; it is believed to be caused by a deficiency in a single gene.



DIABETIC WOMAN UNDERGOING AMNIOCENTESIS  
*Eliminating the uncertainty.*

lieve that man should not tamper with his inheritance. Yet even before the structure of DNA was defined and the genetic code broken, doctors had begun, mostly by trial and error, to develop techniques of genetic medicine.

Man today is heir to a host of inherited imperfections, ranging from diabetes to degenerative nerve disease. Each individual, geneticists have determined, carries between five and ten potentially harmful genes in his cells, and these flawed segments of DNA can be passed down to his progeny along with the messages that determine whether a child will have red hair or blue eyes.

Nature itself takes care of the worst genetic mistakes. One out of every 130 conceptions ends before the mother even realizes she is pregnant because the defective zygote, or fertilized egg, never attaches itself to the wall of the uterus.

Most people are unaware that they are carrying defective genes until they have a deformed, diseased or mentally retarded child. While medical science has not yet developed the techniques for repairing the bad genes, it can increasingly determine that they are present. Genetic counselors can thus advise prospective parents on the possibilities that their offspring will be born with genetic diseases. Properly informed, a couple that runs a high risk of producing a defective child may well decide to forgo having children.

If both parents carry genes for diabetes, for example, the chances are one in four that their children will inherit an increased risk for developing the disease. If either parent actually suffers from diabetes, the odds are even worse. Members of one large South Dakota family afflicted with a rare



## The New Genetics

degenerative nerve disease have been advised, for example, that the odds are 50-50 that any children they have will suffer loss of balance and coordination and die, probably of pneumonia, by age 45 (TIME, Jan. 25).

Genetic counseling once relied more heavily on mathematics than medicine to predict the chance of hereditary handicaps. But it is now possible for doctors to identify and catalogue chromosomes. If there are certain chromosomal abnormalities, the prospective parents are informed that they will almost definitely produce deformed offspring. While this knowledge may take some of the mystery and romance out of procreation, it also eliminates much of the uncertainty. As one geneticist puts it, "There is nothing very romantic about a mongoloid child or a deformed body."

An even more important technique enables physicians to examine the cells of the unborn only months after conception and to determine with accuracy whether or not the infant will inherit his parents' defective genes. The procedure is known as amniocentesis, from the Greek *amion* (membrane) and *ken-tesis* (pricking); it is performed by inserting a long needle through the mother's abdomen and drawing off a small sample of the amniotic fluid, the amber liquid in which the fetus floats. Physicians then separate the fetal skin cells from the fluid and place the cells in a nutrient bath where they continue to divide and grow. By examining the cells microscopically and analyzing them chemically, the doctors can identify nearly 70 different genetic disorders, most of them serious.

Amniocentesis, performed between the 13th and 18th weeks of pregnancy, is not without some risk to both mother and baby. But in cases where family history leads them to suspect genetic defects, physicians feel that the benefits more than justify the danger; for the tests, which have been carried out on more than 10,000 women in the U.S. alone in the past 40 years, have proved extremely accurate. Using amniocentesis, Dr. Henry Nadler, a Northwestern University pediatrician, diagnosed mongolism in ten of 155 high-risk pregnancies tested. Subsequent examination of the fetuses showed that his diagnosis was correct in all cases.

**A**T PRESENT, THE woman who learns through amniocentesis that she is carrying a seriously deformed fetus has only two choices: abortion or the heartbreak of delivering a hopelessly defective infant. But the mother whose unborn baby is found to have one of several hereditary enzyme deficiencies has a more acceptable alternative, for medicine has developed techniques for treating many such ill-

nesses. An amniotic test for fetal lung maturity, for example, has helped warn doctors when a child may be born with hyaline membrane disease, which blocks proper breathing. In those cases, birth can be delayed by sedation until tests show the baby ready to breathe on its own. Tests that permit prompt postnatal detection of PKU give doctors an opportunity to place babies so affected on special diets that prevent the accumulation of the deadly toxins and allow them to live relatively normal lives.

Some treatments are even possible before birth. Physicians routinely perform intrauterine transfusions on fetuses suffering from Rh disease, a genetic condition that results from the incompatibility of maternal and fetal blood.

Artificial insemination, once the exclusive province of livestock breeders, also offers escape from some genetic mis-



"GOOD MORNING, DADDY."

haps. An estimated 25,000 women whose husbands are either sterile or carry genetic flaws have been artificially inseminated in the U.S. each year, many of them with sperm provided by anonymous donors whose pedigrees have been carefully checked for hereditary defects. Some 10,000 children are born annually of such conceptions.

Doctors also see possibilities in artificial inactivation, a procedure in which an egg cell is taken directly from the ovaries, fertilized in a test tube and then reimplanted in the uterus. By carefully scrutinizing the developing embryo in the test tube, doctors could spot serious genetic deficiencies and decide not to reimplant it, thus avoiding an abortion later on. If the embryo is normal, it could even be reimplanted in the womb of a donor mother and carried to term

there, enabling the woman either unable or unwilling to go through pregnancy to have children that were genetically her own.

Even test-tube babies, once the stuff of science fiction, are now not only possible, but probable. Dr. Iandrum Shettles of Columbia University and Dr. Daniele Petrucci of Bologna, Italy, have shown that considerable growth is possible in test tubes. Shettles has kept fertilized ova growing for six days, the point at which they would normally attach themselves to the lining of the uterus. Petrucci kept a fertilized egg alive and growing for nearly two months.

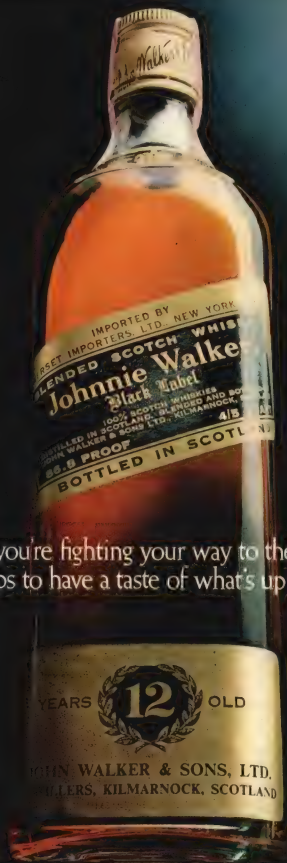
## INDEED, ONLY

development of an "artificial womb" capable of supporting life stands in the way of routine ectogenesis, or gestation outside the uterus, and now even this problem may yield to solution. Scientists at the National Heart Institute have developed a chamber containing a synthetic amniotic fluid and an oxygenator for fetal blood, and have managed to keep lamb fetuses alive in it for periods exceeding two days. Once their device is perfected, the baby hatchery of Aldous Huxley's *Brave New World* will be a reality and life without birth a problem rather than a prophecy.

Man may eventually be able to abandon sexual reproduction entirely. That startling and perhaps unwelcome possibility has been demonstrated by Dr. J.B. Gurdon of Britain's Oxford University. Taking an unfertilized egg cell from an African clawed frog, Gurdon destroyed its nucleus by ultraviolet radiation, replacing it with the nucleus of an intestinal cell from a tadpole of the same species. The egg, discovering that it had a full set of chromosomes, instead of the half set found in unfertilized eggs, responded by beginning to divide as if it had been normally fertilized. The result was a tadpole that was the genetic twin of the tadpole that provided the nucleus. Gurdon's experiment was also proof of what geneticists have long known: that all of the genetic information necessary to produce an organism is coded into the nucleus of every cell in that organism.

Man, say the scientists, could one day clone (from the Greek word for through), or asexually reproduce himself, in the same way, creating thousands of virtually identical twins from a test tube full of cells carried through gestation by donor mothers or hatched in an artificial womb. Thus, the future could offer such phenomena as a police force cloned from the cells of J. Edgar Hoover, an invincible basketball team cloned from Lew Alcindor, or perhaps the colonization of the moon by astronauts cloned from a genetically sound specimen chosen by NASA officials. Using the same technique, a woman could





As you're fighting your way to the top,  
it helps to have a taste of what's up there.

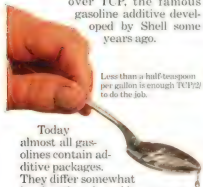
**Announcing TCP/2/<sup>TM</sup>  
-an improvement in  
Shell gasolines.**

**TCP/2/ helps keep  
your car in tune-  
for good mileage  
and fewer exhaust  
emissions.**



**1. TCP/2 helps keep your car in tune. This helps hold down exhaust emissions in newer cars, reduce emissions in many older cars—and helps to keep your mileage up.**

TCP/2 is Shell's name for a new combination of ingredients—what petroleum chemists call an “additive package.” It is an improvement over TCP, the famous gasoline additive developed by Shell some years ago.



Less than a half teaspoon per gallon is enough TCP/2 to do the job.

Today almost all gasolines contain additive packages. They differ somewhat in what they do and how well they do it. TCP/2 is an effective additive package that provides an improvement in the performance of Shell gasolines.

The effects of TCP/2 can be summed up as *helping to keep your car in tune*. Two of the main pollutants in your exhaust—carbon monoxide and unburned hydrocarbons—can go up when your car goes out of tune.

It would not be unusual for these emissions to soar as much as 50 percent before you even suspect it. By the time your car tells you it

needs a tune-up, emissions can be extremely high.

By helping your car to stay in tune, TCP/2 helps to stave off that serious increase in emissions.

TCP/2 can also have a favorable effect on gasoline mileage. When your car goes out of tune your mileage tends to go down. TCP/2 works to keep that from happening.

Read on to find out how TCP/2 can actually *reduce* emissions from many older cars—and *increase* their gasoline mileage.

**2. TCP/2 keeps new carburetors clean, and helps to clean up dirty ones. Works to hold emissions down and mileage up.**

When excessive deposits build up on the “throat” of your carburetor, your engine is no longer in tune. Emissions can rise dramatically, and mileage usually goes down.

If your car is several years old or more, deposits may have built up on your carburetor throat.

Although most of today's gasolines contain detergents that will keep clean carburetors clean, not all of today's detergents can *cut down* on these deposits once they've formed. TCP/2 does have that ability. It contains a new detergent combination that can start to clean up a dirty carburetor with just a few tankfuls of any Shell gasoline.

This can reduce exhaust emissions substantially. And it generally helps mileage, too.

**3. TCP/2 in both Shell and Super Shell helps extend spark plug life. This helps to hold emissions down and keep your mileage up.**

When spark plugs misfire, a lot goes wrong. Emissions go up, mileage goes down, acceleration is reduced—and you have to buy new plugs.

One of the components of TCP/2 works to prevent spark plug misfire. It combines chemically with certain deposits that build up on your plugs, and keeps those deposits from interfering with the normal spark.

Result: no misfiring caused by deposits to send emissions up and your mileage down (not to mention the good effects on spark plug life and acceleration).

Shell pioneered components of this type and Shell gasolines were the first to contain them.

TCP/2 also helps smooth out rough running in many worn engines that have lost compression.

And one of its components is a special *anti-icing ingredient*. It helps prevent an annoying form of stalling caused by carburetor icing before your engine is fully warmed up on cool, damp days.

**4. TCP/2 in non-leaded Shell of the Future helps protect against valve wear.**

One reason Shell of the Future can be made with no lead at all is a chemical element in TCP/2. This element works to protect your engine against possible valve wear.

Shell could have left some lead in Shell of the Future for the same purpose. But thanks to TCP/2 Shell has been able to remove all the lead.

**Good mileage and fewer emissions—they can go hand in hand.**



When you burn gasoline more completely here...



...you use less gasoline from here...

...and less pollutants are left over to come out here.

• Probably the most important thing you can do is get a tune-up. Over half of all cars on the road need a tune-up. If they all get one, total exhaust emissions in the U.S. would be reduced significantly (and in most cases the effect on mileage would be favorable). You

probably need a tune-up if your car is hard to start, runs rough—or if you haven't had one in 12 months.

• Then, to help your car stay in tune, use a Shell gasoline with new TCP/2. This will work to hold your emissions down—and to keep your mileage up.



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The legendary Canadian.  
In the purple sack.  
Understandably expensive.



Seagram's Crown Royal, Blended Canadian Whisky, 60 Proof. Seagram's Distillers Company, N.Y., U.S.A.

## The New Genetics

even have a child cloned from one of her own cells. The child would inherit all its mother's characteristics including, of course, her sex.

Dramatic as cloning may be, it is overshadowed in significance by a technique that may well be practiced before the end of this century: genetic surgery, or correction of man's inherited imperfections at the level of the genes themselves. When molecular biologists learn to map the location of specific genes in human DNA strands, determine the genetic code of each and then create synthetic genes in the test tube, they will have the ability to perform genetic surgery.

Some molecular biologists envisage using laser beams to slice through DNA molecules at desired points, burning out faulty genes. These would then be replaced by segments of DNA tailored in the test tube to emulate a properly functioning gene and introduced into the body as artificial—and beneficial—viruses.

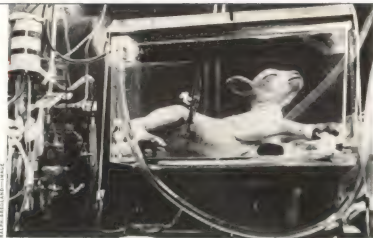
### THE CONCEPT IS

not as farfetched as it sounds. Real viruses are merely segments of DNA (or RNA) surrounded by largely-protein sheaths; they penetrate the cell nucleus (leaving their sheaths behind) and take over the cellular DNA.

The potential of the technique is already being tested by an international research team in the treatment of two children whose hereditary inability to produce the enzyme arginase had resulted in severe mental retardation. The team infected the youngsters with a natural virus, the Shope papilloma, which contains DNA that triggers arginase synthesis. Although the experiment is expected to produce no improvement in the children's mental condition, it may belatedly trigger the production of the missing enzyme and prove that viruses can carry beneficial messages to the cells.

There is other evidence that the beginning of genetic surgery is not far off. Dr. Sol Spiegelman of Columbia University has synthesized an artificial virus that is indistinguishable from its natural model and has used it to infect bacteria and produce new viruses. He and his colleagues have little doubt that they will also eventually create "friendly" viruses and use them to cure disease rather than cause it—by using the viruses to stimulate the production of the chemical products upon which health and life itself depend.

Prophylaxis is important, but man's molecular manipulations need hardly be confined to the prevention and cure of disease. His understanding of the mechanisms of life opens the door to genetic engineering and control of the very process of evolution. DNA can now be created in the laboratory. Soon,



LAMB FETUS IN ARTIFICIAL WOMB

man will be able to create man—and even superman.

Researchers have found that they can increase the life span of laboratory animals by underfeeding them and thus delaying maturation. This phenomenon, they believe, occurs because a smaller intake of food results in the formation of fewer cross linkages—connecting rods that link together and partly immobilize the long protein and nucleic acid molecules essential to life. If scientists can retard cross linking in man, they may well slow his aging process. Scientists also hope that they can some day do away with disease, genetically breeding out hereditary defects while breeding in new immunities to bacterial and other externally caused ailments. Finally, they look forward—in the distant future and with techniques far beyond any now conceived—to altering the very nature of their species with novel sets of laboratory-created genetic instructions.

Current predictions about the appearance of re-engineered man seem singularly uninspired. Some scientists argue that man's head should be made larger to accommodate an increased number of brain cells. They do not, however, explain what man would do with this additional gray matter: there is good reason to believe that man does not use all that he presently possesses. A few others note that the efficiency of man's hands could be increased by an extra thumb and his peripheral vision enhanced by protruding eyes—improvements that seem unnecessary in the light of man's expanding technology.

### SOME FAVOR LESS

obvious alterations. They have suggested that man be given the genes to produce a two-compartment stomach (a cow has four) that could digest cellulose; that mutation could be advantageous if man fails to increase his food supplies fast enough to feed the planet's growing population, but superfluous if he does. They also want man programmed to regenerate other organs, such as he now does with the liver, so that he can repair his damaged or



SEVEN-WEEK-OLD HUMAN FETUS  
Acquiring Promethean power.

dissected heart or lungs if necessary.

Others call for even more specialized humans to perform functions that in reality will probably be done better by machines. British Geneticist J.B.S. Haldane called for certain regressive mutations to enable man to survive in space, including legless astronauts who would take up less room in a space capsule and require less food and oxygen (larger and more powerful spacecraft would seem to be an easier and less monstrous solution). Haldane also suggested apelike men to explore the moon. "A gibbon," he said only half-jokingly, "is better preadapted than a man for life in a low gravitational field."

Eventually, scientists fantasize, man will escape entirely from his inefficient, puny body, replacing most of his physical being with durable hardware. The futuristic cyborg, or combination man and machine, will consist of a stationary, computerlike human brain, served by machines to fill its limited physical needs and act upon its commands.

Such evolutionary developments could well herald the birth of a new, more efficient, and perhaps even superior species. But would it be man?



# The Search for a Cancer Cure

At present there are only three main ways of treating cancer, which will kill more than 335,000 in the U.S. alone this year. Doctors can cut tumors out with a knife, burn them out with radiation or kill them cell by cell with drugs. Though these treatments can be effective in combination, each has its drawbacks. Now, cancer researchers have turned to molecular biology, which shows promise of providing new and more effective means of dealing with the disease.

No one really knows what causes cancer, which is actually more than 100 distinct diseases, all sharing two common characteristics: rapid cell growth and a terrifying tendency to spread from one part of the body to another. Most researchers agree, however, that the vil-

lin's discovery was at first believed to be unique to cancer cells infected by viruses. Thus when Columbia University's Sol Spiegelman and the National Cancer Institute's Robert Gallo found high enzyme activity in the cells of leukemic patients, medical science had a solid clue that leukemia might be caused by a virus. Even more important, some researchers speculated that if the Temin enzyme was found only in cancer cells, the spread of cancer might be halted simply by inhibiting the enzyme.

Their hopes for an immediate cancer cure were short-lived. The NCI's George Todaro and other researchers have since found similar enzyme activity in normal cells as well. They have also found evidence of these enzymes in human and animal embryonic tissues, thus helping to confirm the views of many scientists who believe that cancer is probably an aberration of normal cellular growth.

If it is, Temin thinks he knows why it occurs. According to his hypothesis, normal cells manufacture RNA, which moves to neighboring cells in the form of a provirus, or template, and stimulates the production of a new form of DNA. But, theorizes Temin, if this wandering RNA somehow transmits the wrong message after entering the cells, it can cause the production of altered DNA that orders the cells to grow abnormally.

Dr. Robert Huebner of the NCI speculates that cancer is caused by a noninfectious virus that is a normal part of every living thing. According to Huebner, the virus, which he has labeled the "C particle," is a part of everyone's genetic heritage, a tiny bit of RNA that is passed vertically from one generation to another and perhaps helps normal development by causing the cells of an embryo to grow. The C particle should become inactive as the fetus matures; if it fails to do so, the result is the rapid cell growth that characterizes cancer.

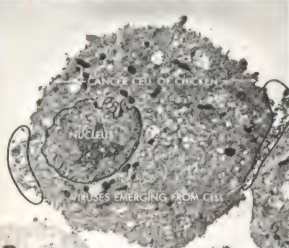
methods of administering medication impractical. But RNA viruses, which produce DNA, have proven their ability to move directly into the cells and could easily carry such communications. Scientists speculate that benign viruses could be made in test tubes with proteins and synthesized RNA. The viruses, injected into the body, would home in on the cancerous growth and shut down the cells' runaway reproductive mechanism.

## AVENUES OTHER THAN

virology are also being explored in the search for a cancer cure. Researchers have long been aware that animal cells growing in a culture medium will stop multiplying once they come in contact with one another. But in some recent experiments at Princeton, Biochemist Max Burger found that when he stripped normal mouse cells of their membranes, they continued to grow wildly—as do cancer cells—even after they had touched. Burger thus speculates that the loss of a cell's protective coating, possibly as a result of viral infection, could lead to cancer by exposing a sensitive area that signals the cells to continue growth. If the protective covering could be restored, he suggests, it might be possible to stop the genes of cancer cells from ordering further growth.

It may even be possible to use the body's immunological mechanism, which now helps to protect it against other diseases, to combat cancer. Some researchers note that organ transplant recipients, who take large doses of drugs to suppress their immune reactions and prevent the rejection of foreign tissue, may develop cancer. Also, the immune system often fails to respond to many cancer cells, although they have unique antigens that should alert the body to their presence. Accordingly, doctors have begun exploring ways of beefing up the body's defenses and immunizing man against cancer in the same way that he can now be vaccinated against polio and other viral diseases.

In a unique series of experiments, Dr. Loren Humphrey of Atlanta's Emory University inoculated patients with a vaccine made, at least in part, with tissues taken from tumors similar to their own. He then followed up the inoculations by cross-injecting the patients with white blood cells from fellow patients who had presumably been sensitized to the tumor antigens. Though only long-term testing will tell if Humphrey's approach is effective, the preliminary results appear promising. One patient with bowel cancer has been free of the disease for three years, while three others have evidenced definite remissions.



CELL INFECTED BY TUMOR VIRUSES  
*The defenses are down.*

lain is a virus, a miniature packet of nucleic acid with a membranous coat that was shown as early as 1911 to cause tumors in animals.

Unable to reproduce themselves, viruses invade normal cells and use their hosts' chemical mechanisms to produce more viruses. Eventually, the infected cell ruptures, releasing the newly formed viruses to infect other cells. Dr. Howard Temin of the University of Wisconsin has shown that some tumor viruses behave differently. They reverse the normal order of genetic transmission, and with the aid of a recently discovered enzyme, use their RNA messenger molecules to produce DNA, the double-helix master molecule. In a way not yet understood, this triggers the cellular genetic machinery to order cell division, causing the cancerous growth that is then perpetuated in succeeding cell generations.

The new enzyme associated with Te-

## MANY RESEARCHERS

believe that the best method of attacking cancer is to use the body's own genetic mechanism to order cancerous cells to stop growing. Transmitting such orders may be difficult. DNA programmed to carry the command would be digested almost immediately by the body's enzymes if it were injected into the bloodstream, thus making conventional

# THE MIND: From Memory Pills to Electronic Pleasures Beyond Sex

In all of his 35,000-year history, Homo sapiens has found it harder to fathom the depths of his mind than to unlock the secrets of his body. But the discoveries of molecular biology may well show the way to a new comprehension; they may make it possible, through genetic engineering, surgery, drug therapy and electrical stimulation, to mold not only the body but also the mind.

Man cannot wait for natural selection to change him, some scientists warn, because the process is much too slow. Yale Physiologist José Delgado likens the human animal to the dinosaur: insufficiently intelligent to adapt to his changing environment. Caltech Biophysicist Robert Sinsheimer calls men "victims of emotional anachronisms, of internal drives essential to survival in a primitive past, but undesirable in a civilized state." Thus, by his own efforts, man must sharpen his intellect and curb his aboriginal urges, especially his aggressiveness.

To most laymen, the idea of remaking man's mind is unthinkable: "You can't change human nature," they insist. But many scientists are convinced that the mind can be altered because it is really matter. Explains Physicist Gerald Feinberg: "What sets us apart from inanimate matter is not that we are made of different stuff, or that different physical principles determine our workings. It is rather the greater complexity of our construction and the self-awareness that this makes possible."

That self-awareness resides in the brain, the organ about which scientists have the most to learn. To Physiologist Charles Sherrington, the brain's 10 billion nerve cells were like "an enchanted loom" with "millions of flashing shuttles." For some functions, M.I.T. Professor Hans-Lukas Teuber explains, brain cells are pre-programmed with "enormous specificity of configuration, chemistry and connection." Some are sensitive only to vertical lines, others only to horizontal or oblique ones. "Each of these little creatures does his thing," Teuber says.

**I**N THE HOPE OF deciphering this staggering variety, hundreds of scientists, including molecular biologists, in the U.S. and abroad, are now turning to brain research. One day in the distant future, their discoveries may help man to improve his already remarkable brain—for despite its dazzling versatility and subtlety, it is not without limitation. "Computers slashing from circuit to circuit in microseconds can cope with the input and response time of dozens of human brains simulta-

neously," Biophysicist Sinsheimer laments. Besides, the brain can call up only a limited amount of stored information at a time to focus it on a particular problem. And while it can grasp as many as 50 bits of visual information at once, it cannot file away more than 10 of them per second for later reference.

To most scientists, this reference system, or memory, is one of the most important tools of man's intelligence. Long before the development of molecular biology, Marcel Proust pondered the mystery of memory in *Remembrance of Things Past*. About a man's own

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PHYSIOLOGIST DELGADO STOPPING BULL IN MID-CHARGE  
Curbing violence with a radio transmitter.

past, he wrote that "it is a labor in vain to attempt to recapture it: all the efforts of our intellect must prove futile. The past is hidden somewhere beyond the reach of the intellect." In *Swann's Way*, it was a tea-soaked *petite madeleine* that touched off the hero's long-forgotten childhood memories. In the scientific world, the stimulus is sometimes a surgeon's probe. Montreal Surgeon Wilder Penfield, for example, while performing operations under local anesthesia, by chance found brain sites that when stimulated electrically led one patient to hear an old tune, another to recall an exciting childhood experience in vivid detail, and still another to relive the experience of bearing her baby. Penfield's findings led some scientists to believe that the brain has indelibly recorded every sensation it has ever received and to ask how the recording was made and preserved.

Initially, some brain researchers believed that memories were stored in electrical impulses. But scientists could not comprehend how a cranial electrical system, however complex its interconnections, could accommodate the estimated million billion pieces of information that a single brain collects in a lifetime.

## THEIR DOUBTS

increased when they found that a trained animal generally remembered its skills despite attempts to disrupt its cerebral electrical activity by intense cold, drugs, shock or other stress; only short-term memory—of recently learned skills—was impaired. There was an obvious conclusion: while short-term memory may be partly electrical, long-term mem-

ory must be carried in something less ephemeral than an electric current.

That something, theorists believed, was chemical. Scientists had long known that chemical as well as electrical activity goes on in brain neurons: these cells carry on metabolism and protein synthesis like other body cells. Researchers soon learned that the leap of message-carrying nerve impulses across the gap between one cell and another takes place only with the help of chemical transmitter substances. One of these, acetylcholine, was promptly identified, and investigators began to look for other brain chemicals, specifically for varieties that might contain memories.

Their reasoning was that just as DNA carries genetic "memories," so other molecules might encode and carry information plucked from transient electrical impulses. Some early researchers proposed the idea of a separate brain molecule for each memory. The

## The New Genetics

hypothesis of Swedish Neurobiologist Holger Hyden of the University of Goteborg was a bit more sophisticated: he thought that RNA was the key to memory formation and was encouraged in his belief by the results of his experiments with rats. When he taught them special tasks, he discovered that the RNA had not only increased in quantity but was different in quality from ordinary RNA. In short, what Hyden did was to lay the groundwork for a molecular theory of memory.

### AS HYDEN'S RAT

experiments demonstrated, RNA itself does not store memories; instead, it may play an intermediary role, stimulating the brain to produce proteins that are perhaps the actual repositories of memory. In one experiment inspired by that theory, University of Michigan Biochemist Bernard Agranoff taught goldfish to swim over a barrier, then injected them with puromycin, an antibiotic that prevents protein synthesis. When the injection was given hours after learning, it had no effect, suggesting that memory proteins had already formed. Injected just before or just after training, the drug prevented learning.

Other experiments based on the RNA-protein theory may demonstrate actual chemical memory transfer. Among the most publicized are those of University of Michigan Psychologist James McConnell and Neurochemist Georges Ungar of the Baylor College of Medicine. McConnell works with planaria, or flatworms, conditioning them by electrical shock to contract when a light is flashed. He then grinds them up and feeds them to untrained worms. Once they have cannibalized their brothers, the worms learn to contract twice as fast as their predecessors. What may happen, McConnell theorizes, is that the first batch of worms form new RNA, which synthesizes new proteins containing the message that light is a signal to

contract. Having consumed these memory proteins, the second group of planaria presumably do not need to manufacture so much of their own; they have swallowed memory, as it were.

Ungar's experiments are similar. Using shock, he conditions rats to shun the darkness they normally prefer, then makes a broth of their brains. This he injects into the abdominal cavities of mice, which seem to react with a parallel unnatural aversion to the dark. Moreover, the more broth Ungar injects, the faster the mice seem to learn this fear. His theory: the memory message (that darkness should be avoided) is encoded by the rats' DNA-RNA mechanism into an amino-acid chain called a peptide, a small protein that Ungar managed to isolate and then synthesize. His name for it: scotophobin, from the Greek words for "darkness" and "fear."

The experiments done by both men are hard to repeat, and investigators are still trying to decide whether the few apparent replications are sound. There is controversy, too, over the meaning of results: critics say it is hard to interpret the behavior of worms and other lower creatures objectively. Some say that Ungar may have discovered not a memory molecule but a molecule that blocked a normal response (to seek darkness) instead of teaching a new reaction (to seek light). Most investigators doubt that a single memory molecule will be found, but they believe that molecular biology will eventually reveal the secret of memory. If so, the blue-sky possibilities are limitless. It might be possible to develop "knowledge pills" that would impart instant skill in French, tennis, music or math. McConnell jokingly proposes another idea: "Why should we waste all the knowledge a distinguished professor has accumulated simply because he's reached retirement age?" His solution: the students eat the professor.

Many less frivolous proposals for improving memory and other aspects of mental life are emerging from molecular biology and genetics. It is known that

genes do not cause behavior. But they influence it and set limits to physical structure, temperament, intelligence and special abilities.

Psychiatrist Alexander Thomas of New York University finds that babies show a characteristic style (easy, difficult or slow-to-warm-up) from their earliest days. While he admits that this temperament may develop in the months after birth, he does not rule out the possibility that it is inborn. Other life scientists warn that "when we strive for equality of opportunity, we must not deceive ourselves about equality of capacity." For example, it is believed that genetic influence is especially great in such areas as mathematics, music and maybe acrobatics. Unless genetic potential is tapped by the environment, it will not develop: kittens prevented from walking will not learn normal form and depth perception. Says Geneticist Joshua Lederberg: "There is no gene that can ensure the ideal development of a child's brain without reference to tender care and inspired teaching."

### THIS INTERACTION

between environment and heredity is one of the factors that make it so difficult to change human characteristics. Another is that nearly all behavioral traits are polygenic—dependent on several genes. But even so complex a trait as intelligence may eventually come under the control of molecular biologists. Some scientists fantasize that supergeniuses will some day be produced by increasing brain size, through either genetic manipulation or through transplantation of brain cells to newborn infants or to the fetus in the womb. (Such cells might be synthesized in the laboratory or developed by taking bits of easily accessible tissue from a contemporary Newton or Mozart and inducing them to turn into brain neurons.)

Another prospect is to alter genes so that babies will be born with rote knowledge—language skills, multipli-

BRAIN-DAMAGED GIRL'S HAPPY MOOD CHANGED TO ANGER (CENTER) & VIOLENCE (RIGHT) BY ELECTRIC PULSES



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## The New Genetics

cation tables—just as birds apparently emerge from the egg with genetic programs that enable them to navigate. Some researchers hope to develop shared consciousness among several minds, thus pooling intellectual resources.

Most observers continue to feel that reining in man's aggressiveness is as important as spurring his intelligence. Harvard Neurosurgeon Vernon Mark advocates a non-genetic approach. "There are basic brain mechanisms that will stop violent behavior, and we are born with them," Mark asserts. To tap those mechanisms, scientists would like to develop an anti-aggression pill (estrogens, or female hormones, have already been used experimentally to inhibit aggressive behavior). Until they do, Mark and two Harvard colleagues—Psychiatrist Frank Ervin and Surgeon William Sweet—are fighting aggression by using surgery to destroy the damaged brain cells that sometimes cause violence in people with specific brain disease. Typical of their patients is a gifted epileptic engineer named Thomas, who used to erupt in rages so frenzied that he would hurl his children or his wife across the room. First, Mark and Ervin sent electric current into different parts of Thomas' brain; when the current sparked his rage, the doctors knew they had found the offending cells. Surgeons Mark and Sweet then destroyed them, and in the four years since, Thomas has had no violent episodes.

Physiologist Delgado has developed even more dramatic methods of aggression control in animals. In one famous experiment, he implanted electrodes in the brain of a bull bred for fierceness. Then, with only a small radio transmitter as protection, he entered the ring with the bull and stopped the angry animal in mid-charge by sending signals into what he believes was its violence-inhibiting center. Similarly, Neuroanatomist Carmine Clemente of U.C.L.A. has shocked cats into dropping rats they were about to kill. But neither man sees any early prospects for remote control of human aggression.

## OTHER MENTAL

problems may well succumb to molecular biology. Many therapists resist the idea that emotional problems have biochemical equivalents; yet Freud himself believed that they do and that they would one day be identified. Researchers are already convinced that schizophrenia has some genetic basis, although, as Psychologist David Rosenthal explains, it is not the disease that is inherited but a tendency to it. As a match must be struck before it will burn, so must the tendency be triggered by something in the environment. No one is yet sure whether the trigger is cultural or familial, electrical or chemical, but some investigators back the chemical theory

on the ground that certain drugs enable schizophrenics to live outside institutions, at least for short periods. To date, drugs for schizophrenia have been administered on a trial-and-error basis: as molecular biologists learn more, it will become possible to use specific drugs to achieve specific ends.

## FURTHER RESEARCH

may provide a bonus of new genetic, chemical and electronic ways to enhance sexual pleasure. Physicist John Taylor, in fact, professes to fear that sex will become so much fun that people will want to give up practically all nonsexual activities. Author Gordon Rattray Taylor predicts that it may become possible to "buy desire," or switch it on or off at will; the playboy might opt for continuous excitement and the astronaut for freedom from sexual urges during space flight.

Unlikely as it may seem, there are researchers who claim to have discovered something better than sex. At McGill University in Canada, Psychologist James Olds used electrodes to locate specific "pleasure centers" in the brains of rats, and then allowed the animals, electrodes still in place, to stimulate themselves by pressing a lever. Given a choice, the rats preferred this new pleasure to food, water and sex. Some pressed the lever as many as 8,000 times an hour for more than a day, stopping only when they fainted from fatigue.

Such experiments lead Herman Kahn of the Hudson Institute to predict that by the year 2000, people will be able to wear chest consoles with ten levers wired to the brain's pleasure centers. Fantasies Kahn: "Any two consenting adults might play their consoles together. Just imagine all the possible combinations: 'Have you ever tried ten and five together?' couples would ask. Or, 'How about one and one?' But I don't think you should play your own console; that would be depraved."

Author Taylor, on the other hand, sees nothing wrong with solitary pleasure. Some day, he writes, a man may be able to put on a "stimulating cap" instead of a TV set, and savor a program of visual, auditory and other sensations. He and other futurists envision "experience centers" or "drug cafés" that would replace bars and coffeehouses. There, perhaps with the help of "dream machines," one might order a menu of "enhanced vision, sensory hallucinations and self-awareness." One might also

be able to experience the mental states of a great man, or even of an animal. Molecular Biologist Leon Kass of the National Academy of Sciences projects a world in which man pursues only artificially induced sensation, a world in which the arts have died, books are no longer read, and human beings do not bother even to think or to govern themselves.

Some life scientists see even greater perils in man's new knowledge. "I would hate to see manipulation of genes for behavioral ends," warns Stanford Geneticist Seymour Kessler, "because as man's environment changes, and as man changes his environment, it is important to maintain flexibility." Professor Gerald McClearn of the Institute for Behavioral Genetics at the University of Colorado agrees, explaining that a gene that is considered



ELECTRICAL STIMULATION OF THE BRAIN  
Locating the pleasure center.

"had" now might become necessary for survival in the event of drastic environmental change. "It is foolhardy to eliminate genetic variability," he says. "That is our evolutionary bankroll, and we dare not squander it. Species that ran out of variability ran out of life."

Such worries are probably premature. To some experts, the more radical forms of behavior control, especially genetic modification, belong to the realm of science fiction. Yet others believe that biological predictions are always too conservative, and that man will soon proceed, and succeed, with his experiments. If he does, he must prepare himself for a social and moral revolution that would affect some of his most cherished institutions, including religion, marriage and the family. With such possibilities in mind, Nobelist George Beadle has warned that "man knows enough but is not yet wise enough to make man."

## THE SPIRIT: Who Will Make the Choices of Life and Death?

The quantum leap in man's abilities to reshape himself evokes a sense of uneasiness, a memory of Eden. Eat of the forbidden fruit, God warns, and "you shall surely die." Eat, promises the serpent, and "you shall be like God."

That temptation—to be "like God"—is at the root of the ethical dilemmas posed by molecular biology. In one sense, the new findings have continued the work of Newton, Darwin and Freud, reducing men to even tinier cogs in a mechanistic universe. At the same time, it was man himself who deciphered the code of life and who can now, in Teilhard de Chardin's phrase, "seize the tiller of the world." If he is only a bundle of DNA-directed cells, more sophisticated but hardly dissimilar from those of animals and plants, he can at least use that knowledge to improve, even to re-create himself. But should he?

In his persuasive 1969 book *Come, Let Us Play God*, the late biophysicist Leroy Augenstein argued that man takes the role of God by default or design and has always done so. Ecologically, he changes the very face of the earth: first with plows, then with dams, insecticides and pollution, he has seriously upset the balance of nature. His humane instincts and scientific curiosity team up to preserve life so well that

the world faces a population crisis. Moreover, by extending the lives of those with defective genes, science increases the chance that damaging genes will be passed down to ever-larger portions of succeeding generations. Germany's pre-eminent Protestant ethicist, Helmut Thielicke, notes that men must recognize how "the act of compassion to one generation can be an act of oppression to the next." Thielicke argues that men must be willing to make hard choices. If society intervenes to keep alive the hereditarily ill (as he believes it should), then it must also be willing to intervene again, perhaps even sterilizing some with hereditary diseases.

### THIS IS ONLY ONE

kind of ethical problem raised by the new genetics, and it is already close at hand. Other problems are still in the far future, but how the dilemmas of population control are handled will set important patterns for later issues.

Population pressures increase the likelihood of widespread government drives, or even coercion, to limit births. Couples who are warned by genetic counseling that they risk producing deformed offspring would face far greater pres-

sure than they do now to avoid having children: those with defective genes could become, in effect, second-class citizens, a caste of genetic lepers.

One current example illustrates the problem. Amniocentesis can now quite accurately predict whether a fetus is mongoloid; women carrying such abnormal fetuses are now encouraged, where it is legal, to have abortions. Already a number of medical planners are pointing up the cost-effectiveness of abortion in those cases. Unless the birth rate of mongoloid children is reduced, their care by 1975 may well cost some \$1.75 billion nationally.

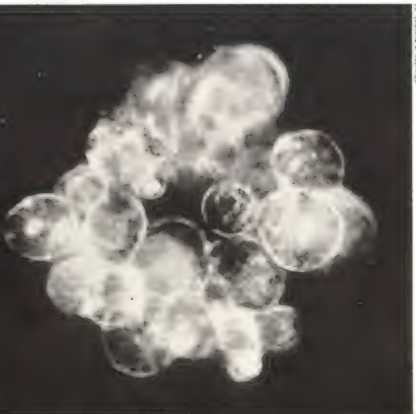
Methodist Paul Ramsey, Professor of Religion at Princeton and one of the top Protestant ethicists in the U.S., protests the aborting of such abnormal fetuses as an unjustified taking of human life. But he does not think moral men can avoid the problems of population and genetic crises. Indeed, he urgently recommends that society develop an "ethics of genetic duty." The right to have children can become an obligation not to have them, Ramsey asserts; it is shocking to him that parents will refuse genetic counseling and take the "grave risk of having defective children rather than remain childless." Dead set as he is against abortion in all but the most serious cases, Ramsey would prefer to see one parent undergo voluntary sterilization. "Genetic imprudence," he says, "is gravely immoral."

To Ramsey and others, genetic surgery—reparing, replacing or suppressing a "sick" gene—could be profoundly moral. Depending on the defect, genetic surgery before or after birth could prevent abnormality, and also insure that it was not passed on. Moral Theologian Bernard Häring of Rome's Accademia Alfonsiana applauds basic remedial intervention as "corrective foresight."

### BUT HÄRING IS ONE

among many, both scientists and ethicists, who find it considerably harder to justify "positive" genetic engineering, restructuring the genes to make the "perfect" man. The prospect suggests apocalyptic possibilities: M.I.T. Biologist Salvador Luria approaches it "with tremendous fear of its potential dangers." Biologist Joshua Lederberg of Stanford University disowns such Utopian aims as a proper goal for serious biology, and even doubts that techniques sophisticated enough to achieve them could be perfected in the near future. But the possibility nonetheless tantalizes: Who would decide what qualities to preserve, and by what standards? Even remedial genetic engineering could pose a distressing problem if it achieved the ability to remove "undesirable" behavior tendencies. Asks Thielicke: "Would one try to eradicate Faust's restlessness, Hamlet's indecision, King Lear's con-

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## The New Genetics

science, Romeo and Juliet's conflicts?"

Human cloning, the asexual reproduction of genetic carbon copies, raises similar questions. Who shall be cloned, and why? Great scientists? Composers? Statesmen? When Geneticist Hermann J. Muller first broached the idea of sperm banks in *Out of the Night* (1935), he suggested Lenin as a sperm donor. In later editions, Lenin was conspicuously absent, replaced on Muller's list by Leonardo da Vinci, Descartes, Pasteur, Lincoln and Einstein. Society could well be as fickle—or worse—about cloning. It might create a caste of subservient workers, as in 1984, or a breed of super-warriors out of a "genetics

Such fanciful fears tend to obscure deeper ethical and practical objections to cloning. The process could be used, for example, to allow a woman to produce a child without passing on her own or her mate's defective gene. A cell nucleus from the genetically sound parent could be substituted for the nucleus in her egg. But even that quite reasonable application could introduce a novel set of complications. Would the cloned child develop a sibling rivalry with its biological parent? Would he face a severe identity crisis, being someone else's "duplicate"? Beyond such considerations, a number of scientists and ethicists would list cloning among those things that men should never do, even if they can. Says Embryologist Robert T. Francoeur, author of *Utopian Motherhood*: "Xeroxing of people? It shouldn't be done in the labs, even once, with humans."

### TO MANY CRITICS

cloning is only one of several biological developments that threaten what Paul Ramsey calls "a basic form of humanity": the family. Ramsey thinks that artificial insemination by a donor, which is already fairly common, has opened the door to further invasions of family integrity. In his recent book *Fabricated Man*, he mentions other possible developments: artificial inactivation (the "prenatal" adoption of someone else's fertilized egg), "women hiring mercenaries to bear their children," and "babies produced in hatcheries." Beyond finding some of the possibilities repellent, Ramsey argues that they violate "covenant-fidelity," a bond of spiritual

and physical faithfulness, between wife and husband or parent and child.

Francoeur, on the other hand, feels that the new embryology can lead to a fresh flexibility in the family structure. He favors host mothers (Ramsey's "mercenaries") because some women want children but cannot carry them to term. In an opposite way, artificial inactivation could be the means for a sterile mother to bear a child, even if not from her own egg. But he draws the line at artificial wombs, which, he says, "would produce nothing but psychological monsters." Others emphasize that the family itself must survive to fill important psychological needs. Molecular

trucci embryo lived for 59 days before it died because of a laboratory mistake. The Vatican, which sternly forbids all experimentation with fertilized eggs, demanded that Petrucci cease his investigations. He agreed to comply.

### IN A RECENT

experiment conducted by Landrum Shettles at Columbia University, a 100-cell human embryo growing in a petri dish was unceremoniously pipetted in a salt solution onto a glass slide. For those who believe that human life begins with fertilization, Shettles' simple

laboratory procedure was an act of unjustifiable killing, even though such experiments might help perfect a morally justified technique like genetic surgery. Even in the case of laboratory mistakes that might produce monsters, argues Bernard Häring, only those that are clearly inhuman should be destroyed. A number of scientists, on the other hand, subscribe to an alternate ethical view that an embryo is not human until later in its development—perhaps as early as two months or as late as six months.

Most scientists, naturally, fight what they see as arbitrary limits on their right to experiment. But not all. Testifying before the House subcommittee on science in January, Molecular Biologist James Watson took time off from his cancer investigations to express concern

about developments in embryo research. Predicting that many biologists would soon join Britain's R.C.G. Edwards in experimenting with human eggs, Watson suggested that one course of action could be to prohibit all research on human cell fusion and embryos. Failing that, he proposed international agreements limiting such research before it becomes widespread and irresponsible, and before "the cat is totally out of the bag."

Watson is not alone in his worries. Last summer Biologist James Shapiro, one of three young scientists who successfully isolated a bacterial gene, gave up his promising career to take up social work because he feared government misuse of genetic achievements. An Episcopal priest, Canon Michael Hamilton of Washington (D.C.) Cathedral, called Shapiro's action a "loss of nerve." Yet the looming issues are enough to test the nerve of any thoughtful man. Central is the question: Who will decide? Who will make the choices not only of life and death, but what kind of life?

To consider such issues, Roman Catholic Lay Theologian Daniel Callahan



"DON'T LAUGH, HARKNESS—BUT EVERY TIME I START AN EXPERIMENT THESE DAYS, I WONDER WHETHER IT'S GOING TO BE THE ONE WHERE I END UP FINDING RELIGION."

Biologist Leon Kass, who left the research labs to become executive secretary of the National Academy of Science's Committee on the Life Sciences and Social Policy, puts it effectively: "The family is rapidly becoming the only institution in an increasingly impersonal world where each person is loved not for what he does or makes, but simply because he is. Can our humanity survive its destruction?"

Beyond population control, beyond "Xeroxing" and patterning people, beyond the survival of the family lies the ultimate ethical question: the sanctity of life itself. The move toward new knowledge requires experimentation. The new generation of experiments, however, involves human life, and many moralists suggest that many of those experiments are intrinsically evil because they toy with life. They point, for example, to the experiments by Italian Biologist Daniele Petrucci, who in 1961 announced that he had kept a fertilized egg alive for 29 days *in vitro* (in the glass) before letting it die because it was monstrously deformed. Another Pe-



## The New Genetics

and a number of like-minded ethicists and scientists have set up the Institute of Society, Ethics and the Life Sciences. Among the 70 members are Geneticist Theodosius Dobzhansky, Psychiatrist Willard Gaylin, Theologian John C. Bennett, and U.S. Senator Walter F. Mondale of Minnesota, who three years ago introduced a bill to establish an interdisciplinary committee to examine new scientific problems. It did not pass, but Mondale is trying again this year. "There may still be time," he says, "to establish some ground rules."

The long-term goal of the institute, says Callahan, is "legitimizing the problems," making the study of ethical issues a respectable part of the scientific curriculum. Too many scientists, says Gaylin, "see this as something mushy, something for Sunday morning, beyond the realm of science." To change that situation, the institute is trying to educate legislators on the importance of ethical considerations, and is encouraging universities to offer a solid background in ethical studies for "every scientific professional." At the Texas Medical Center in Houston, a similar interdisciplinary effort has been started by the Institute of Religion and Human Development and the Baylor College of Medicine. The Sunday School Board of the Southern Baptist Convention has developed a thorough adult-education course on biomedical issues as one of its electives for this spring.

Cancer Researcher Van Rensselaer Potter of the University of Wisconsin has suggested in a new book, *Bioethics*, that the U.S. create a fourth branch of Government, a Council for the Future, to consider scientific developments and recommend appropriate legislation.

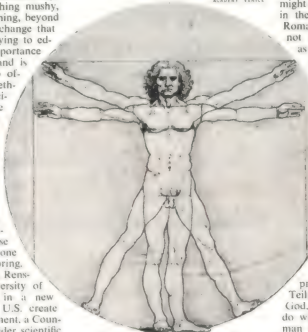
Indeed, some form of super-agency may be the only solution to the formidable legal problems sure to arise. Already, laws relating to artificial insemination by a donor are in confusion; developments such as donor mothers and cloning will raise even more complicated questions. If a mother had herself cloned without her husband's permission, for only one example, would he be legally responsible for the child?

**S**OME SCIENTISTS, however, frankly believe that laymen are ill equipped to discuss issues with them, let alone share control of what they do. The matters, they contend, are technical and should be decided by the technical men who understand them. Even if government does enter the field, points out Daniel Callahan, much of the

success of any ethical policy will depend on a responsible professional code. "If you depend solely on laws, sanctions and enforcements," says Callahan, "the game is over." Molecular Biologist Francis Crick is confident that basic morals and common sense will prevail. Some of the wilder genetic proposals will never be adopted, he claims, because "people will simply not stand for them."

Some ethicists and scientists argue that the worries, the plans and the proposals are premature, that ethics has always been an *ad hoc* thing, dealing with the world as it is, not as it might be in the future. Given the enormity of the new problems and the speed of change, that attitude may be a luxury.

ACCIDENT VEHICLE



LEONARDO DA VINCI'S MAN  
Seizing the tiller of the world.

Beyond the sanctity of human life, the single criterion that ethicists most often mention as an absolute, or nearly one, is human freedom. Scientific advances, as they see it, can either promote freedom or inhibit it, but the distinctions are not always obvious or easy. The danger is that a democratic society might therefore fail to act at all, and by default pass the problems—and the solutions—to a small, uncontrolled elite, leading perhaps ultimately to a totalitarian government. The late author C.S. Lewis warned more than a quarter century ago that "man's power over Nature is really the power of some men over other men, with Nature as their instrument."

Despite the urgency, there can be no single ethical approach to the problems posed by the new genetics. The mecha-

nisms may want simply to deal with the facts of molecular biology, exploiting its discoveries as well as they know how, but not quite willing to look beyond to spiritual considerations.

## A

mong many religious thinkers, there is an affection for the futurist philosophy of Teilhard de Chardin, who wrote glowingly of a coming scientific age when men would exult in "fathoming everything, trying everything, extending everything" on their road to an ultimate Omega Point of shared godhood. Finally, there are those, believers and unbelievers, who know man to be a victim of what might still be called original sin. Those in the religious community, especially Roman Catholics, warn that man must not tinker with such sacred values as life and the family for fear of disturbing the natural order of things. Those in the scientific world, more pragmatically, tend to mirror Potter's warning about "dangerous knowledge"—knowledge that accumulates faster than the wisdom to manage it.

There is hardly a chance for complete consensus among the three schools, but it may help to borrow a lesson or two from each. From the mechanist, his conviction that there is an order in the physical world, discoverable and manageable if it is approached with enough humility to comprehend its mysteries. From the Teilhardians, the confidence that God, whoever he is, has something to do with the future and may yet meet man there. From those who still believe in man's propensity for error, the willingness to put on the brakes a bit and reflect on values and consequences—but also, as Helmut Thielicke counsels, the courage to act despite almost certain knowledge that man will make serious mistakes.

As they look back toward the time when man stood on the threshold of a biological revolution, troubled and uncertain, but determined to push ahead, what will the beings of the future say about their ancestors? Caltech Biologist Robert Sinheimer suggests an optimistic—and poignant—answer in his essay "The Mind of Pooh": "Perhaps, when we've mutated the genes and integrated the neurons and refined the biochemistry, our descendants will come to see us as we see Pooh: frail and slow in logic, weak in memory and pale in abstraction, but usually warmhearted, generally compassionate, and on occasion possessed of innate common sense and uncommon perception."



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## ENVIRONMENT

### The Rise of "Rejasing"

The U.S. has come a long way since Ben Franklin preached thrift and New Englanders saved everything from string to scraps of cloth for patchwork quilts. In frugal foreign eyes, 20th century Americans are stupendous wasters; a people so rich that they think no more of tearing down 30-year-old skyscrapers than of tossing beer cans out car windows. Now a turnaround seems at hand. Goaded to recycle the nation's mounting garbage, individuals as well as industries have spotted new charms in old discards—cans, bottles, light bulbs. Thousands of Americans are enjoying an effort that bears the acronymic description "rejas"—"re-using junk as something else."

**Booth Sofas.** "I pick up usable trash," says Hugo Mesa, a commercial designer in Los Angeles. "It's all potential pollution." In his hands, a discarded beer barrel becomes a leather-slung chair, old railroad ties turn into thick benches, tin cans take on new life as lamps. "Salvaged waste has value," agrees George Korper, proprietor of the Eco-Center store in Greenwich, Conn., which sells things like telephone-cable spools as \$2 patio tables. Going one better, Mrs. Jerrald Dixon of Crown Point, Ind., makes "Old Woman in the Shoe" table centerpieces with plaster figures and her husband's worn-out Army boots.

A Los Angeles doctor takes old X-ray pictures, adds a little yarn edging and creates startling piece mats. In Research Engineer Peter Gottlieb's West Los Angeles home, one child sleeps happily beneath a headboard made of bright cartons of Screaming Yellow Zonkers, a beloved popcorn product. Or consider Dr. Richard Gieser's sparkling décor in Wheaton, Ill.: his sofa is an old bathtub on legs, with one side cut away, lined with pillows. His favorite chair is another tub, upended. It has, Mrs. Gieser says, "a nestlike quality."

Aspiring rejasers can find ample tips in books like Joan Ranson Shortney's *How to Live on Nothing* (Pocket Books;

95c), which includes a 100-item check list for transforming everyday discards. A light bulb, for instance, makes a handy sock-darning egg. With blackboard paint, an old window shade becomes a roll-up chalkboard for children. By nailing upturned bottle caps to a board, the kids can make a front-door footscraper. These days, rejasers even dump junked cars neatly offshore: the hulks act like coral reefs, attracting fish—and fishermen.

Though orange crates make adequate cupboards and aluminum-can pull-tabs can be joined into long jangly curtains, there is a definite limit to the practical re-use of junk. Beyond that point, people invent "junkie" art. At the Whole Earth Marketplace in Encino, Calif., eggbeaters plus scraps of waste metal become amusingly stylized model helicopters. New York Literary Agent Peter Matson unabashedly makes collages of stained rags, and paints multishaped polyurethane packing crates, which he duly frames and hangs. "It is a creative act," he says. "I also seems a way to make technology work for me rather than vice versa."

**One Man's Trash.** FORTUNE Art Director Walter Allner sees the everyday detritus of a consumer society in a different light: "I have such respect for the engineers and designers who spend literally hundreds of hours designing products and their packaging that I want to extend the usefulness of things." Allner's Manhattan apartment is full of intriguing results. Crushed tin cans have become fancy wall freezes; a broken wine bottle is redesigned as a stunning rose vase; and huge clusters of beer bottles are glued together to make abstract sculptures. On one wall, a shadow-box assemblage of coffee-can keys and lead wine labels forms a witty collage of "medals"—a spoof on Allner's many legitimate art prizes. Other elegant murals and sculptures turn out, on inspection, to be composed of Styrofoam egg cartons and packing materials that Allner particularly admires: "Besides,"

he wryly adds, "the foam looks better than the cracked plaster behind it."

The biggest benefit of rejasing is that virtually indestructible objects never reach the garbage heap. The first grade at the Driscoll School in Brookline, Mass., for example, is building a sculpture from Clorox bottles, makeup cases and other plastic objects. "It is an excellent material for outdoor use," says Teacher Mrs. Donald Shelby, "for the same reason that it is difficult to recycle." Whatever all this says about the future of art, it surely proves that in an ecology-minded era, one man's trash is another's treasure.

### Tumult Over Timbering

According to a 1960 federal law, the 154 national forests in the U.S. must be used for multiple purposes—recreation, timbering, grazing, wildlife preservation, watershed protection. But the U.S. Forest Service, an agency of the Agriculture Department that manages national forests, has lately given top priority to private logging on public land. The service's budget is hiked when it does more timber business. Furthermore, President Nixon has ordered a 60% increase in the logging of national forests in order to meet a goal of 26 million new housing units by 1978.

As a result, the Forest Service has increasingly endorsed "clear-cutting," an efficient logging method that involves cutting down all timber, after which a denuded area is replanted with the most marketable species. Is this good or bad for the country's 182 million acres of national forests?

**Into Oblivion.** Last week conservationists swarmed into Washington to protest the Forest Service's actions before the Senate Subcommittee on Public Lands. In Montana's 1,575,000-acre Bitterroot National Forest, argued Guy M. Brandborg, a former Forest Service official, clear-cutting has caused widespread erosion, threatening watersheds, wildlife and recreation. Wyoming Senator Gale McGee said that instead of regenerating naturally after clear-cutting, as the Forest Service claims, the forests often have to be replanted with



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seedlings, a difficult and hazardous task, especially on steep slopes. McGee also said that timber companies favor clear-cutting over selective cutting (the removal of only ripe or harmful trees) because they can use giant machines that flatten thousands of trees a day, a money-saving if destructive practice.

Lumbermen argued just as strongly that clear-cutting helps control disease and produces "even-age" forests that provide quality timber. They stressed economics: the yield for a clear-cut area is 100%, compared to about 60% for selective cutting. Howard Bennett, secretary-manager of Appalachian Hardwood Manufacturers, went even further. Today's unmanaged forests, he said, are "graveyards of once fine trees that are now rotting hulks on the forest floor, sent into oblivion by the sincere but misguided efforts of those who confuse preservation with conservation."

**Needed Regulation.** By contrast, many expert witnesses argued that clear-cutting is ecologically damaging. Hurlon Ray, director of the Northwest regional office of the Federal Water Quality Office, contended that such logging can cause a 7,000-fold increase in stream sedimentation and destroy fish-breeding grounds. It also reduces food sources for birds and small mammals. Beyond all that, clear-cutting is unsightly, at least to those who value national forests as something far different from the "tree farms" that loggers favor.

To neutral observers, the Washington hearings suggested that clear-cutting needs regulation. In the northern Rockies, for example, trees grow so slowly that clear-cutting is relatively unprofitable and a threat to that area's national forests as well. Since the danger is much less in other areas, the problem is how to make distinctions.

To that end, some witnesses urged the Government to encourage tree farming in privately owned forests, which account for 73% of the nation's wooded land. Others urged a far greater effort to recycle the millions of tons of paper products that become litter in the U.S. each year. Before anything else is done, conservationists would like a moratorium on all federal timber sales, until a full-scale investigation can be made of federal management policies. That may be asking too much, but one thing is clear: U.S. forests are now being cut faster than they are being replanted.

### Week's Watch

With a canoe and sampling bottles, two Penn State University professors spent five months last year testing 60 miles of the Ohio and Monongahela rivers near Pittsburgh. As a result, Biologist John Zavodni and Political Scientist David Nixon (no kin to the President) documented 500 cases of industrial water pollution and filed 362 affidavits with the Justice Department.

Last week their diligence paid off. Jus-

tice charged four big companies with 73 violations of the 1899 Refuse Act, which forbids discharge of pollutants into navigable waters. The defendants, accused of dumping acids, cyanides and metals into the rivers, are Pennsylvania Industrial Chemical Corp. and three top steel companies: U.S. Steel, Jones & Laughlin and Wheeling-Pittsburgh. If convicted, the companies could be fined up to \$2,500 for each violation. Under the 1899 law, moreover, Professors Nixon and Zavodni stand to get a bounty—50% of the assessed fines. If they get enough cash, they plan to organize a river-monitoring service that will use more sophisticated equipment than a canoe and sampling bottles.

In the past, the International Automobile Show in New York City's mammoth Coliseum has been an annual rite of spring for eager dealers



ANTI-AUTO DEMONSTRATORS  
Protesting a rite of spring.

and motorists. This year's show, which ends this week, was singularly different. The cars were there—and so were environmentalists.

"It's like conducting an antiwar rally at a construction site," quipped Jerome Kretschmer, head of the city's Environmental Protection Administration. On the first day of the show, Kretschmer spoke at a rally, launching a march on the Coliseum that was led by black-robed protesters wearing gas masks. Inside, his men set up a booth, complete with slides depicting auto pollution and pleas to car buffs: "The car is anti-city. It clogs our streets, fouls the air, assaults our ears, devours our open space." The opening of the booth created a brief stir among the patrons and exhibitors; then everyone returned to serious business—admiring those new cars.

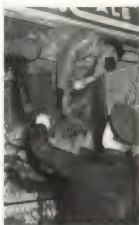
## Which of these cities has the least crime?



New York



Philadelphia



Boston



Chicago



St. Louis



San Francisco



Los Angeles

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## THE LAW

### No-Nonsense Innovator

Two years ago, Billie Austin Bryant stood before U.S. District Judge Gerhard A. Gesell in Washington, D.C., to await sentencing after having been convicted of killing two FBI agents. Under the law, Judge Gesell had only two alternatives: electrocution or life imprisonment. Though he declared that death was merited by the mercilessness of the deed, the judge spared Bryant's life. "It would not serve the ends of effective justice to allow the defendant the luxury of all the special attention that a capital penalty would generate," he said. Addressing the defendant, Gesell intoned: "Mr. Bryant, you will die in jail, but at such time as God appoints."

As that episode indicates, Gesell, 60, may be something of a moralist, but he also has a tough, coldly pragmatic view of the law and the realities of its enforcement. His judicial reputation, however, is built on stronger legal stuff than simple allegiance to law-and-order. Gesell is, in fact, a judicial activist whose innovative opinions have upset antiquated laws, blasted unresponsive city governments and, most recently, challenged the prerogatives of 117 members of the U.S. Congress. Since he became a judge in 1968, Gesell has:

- Struck down a 68-year-old District of Columbia law that made it a crime for any doctor to perform an abortion except when necessary for the preservation of the mother's life or health. Finding the law unconstitutionally vague, Gesell urged Congress to write "a far more scientific and appropriate statute for the District of Columbia." Gesell's decision left physicians free to perform abortions so long as the reasons for the operation satisfied both doctors and their patients.

- Ordered the District of Columbia to pay for gas, water and electricity in inhabited slum houses whose owners had refused to foot the bill. He relied in part on a D.C. statute permitting the mayor to provide for utilities and impose a lien on such property. "Where hundreds of residents already living a marginal existence in substandard housing face a cutoff of gas, water and electricity," he wrote, "the municipality has a duty to exercise its inherent power."

- Ruled earlier this month that the 117 members of Congress who hold commissions in military reserve units were violating the Constitution's provision that no person holding any office under the authority of the United States shall be a member of either House. Said Gesell: "Given the enormous involvement of Congress in matters affecting the military, the potential conflict between an office in the military and an office in Congress is not inconsequential." He left to higher courts, the Congress and the Executive the problem of what to do about the situation.

Son of Dr. Arnold Gesell, the late famed pediatrician, Gerhard grew up in New Haven and attended Yale. After graduation, he was undecided whether to go into medicine or law. To help his son make up his mind, Dr. Gesell invited him to attend a major surgical operation. Young Gesell stayed a few bloody minutes, then fled from the amphitheater. His mind was made up: law.

After earning his degree from Yale Law School (which awarded him its Citation of Merit in 1967), Gesell began his professional career as a staff attorney for the Securities and Exchange Commission and later became technical adviser to the commission chairman. Armed with the expertise he had ac-



JUDGE GESELL

*Some cases belong to God.*

quired at the SEC, Gesell joined the prestigious Washington law firm of Covington & Burling; during his 26 years with the firm, he established a reputation as one of the most articulate and thorough trial attorneys in town.

As a prosperous Washington attorney, Gesell often invited colleagues to join his family at their summer house in Maine, where he sometimes cooked breakfast, washed dishes and showed his considerable skill as a sailor between long hours of legal work. With the extreme pressures of his judicial office (an estimated 100 criminal and 300 civil cases a year is the normal load for each D.C. district judge), Gesell entertains less frequently now and never talks off the bench about his job. Such legal discussions, Gesell believes, could compromise his independence as a judge. He speaks only through his pithy, straight-talking court opinions, which have already marked him as one of the most independent judges in the U.S.

### Third-Party Snooping

When ex-Convict James A. White settled down at his pal Harvey Jackson's house, the talk often centered on White's drug-pushing activity. Jackson was an attentive listener. So were two federal agents, one hidden in Jackson's kitchen closet, the other outside his home in Chicago.

Thanks to a radio transmitter strapped to Jackson, a police informer, the agents recorded those incriminating conversations, plus others between the two men in Jackson's car, at White's home and at a public restaurant. On the basis of the agents' eavesdropping testimony, White was convicted of seven drug offenses, fined \$35,000 and sentenced to 25 years in prison. A U.S. appeals court later threw out the conviction on the ground that the agents had failed to get a judge-approved warrant and therefore the bugging violated the Fourth Amendment's ban on unreasonable searches and seizures.

**Persuasive Argument.** Last week a deeply divided U.S. Supreme Court saved the Government's case, holding that neither state nor federal agents need warrants to rig their informants with bugs. Four Justices felt bound by a line of cases holding that an individual has no constitutional right to protection from informers. "Inescapably," wrote Justice Byron White for the majority, "one contemplating illegal activities must realize and risk that his companions may be reporting to the police." White found the addition of a hidden third party to the conversation an unpersuasive argument to challenge the constitutionality of the surveillance. According to White, if a companion may inform, he may also transmit. Justice Hugo Black concurred with the four because, in his opinion, "the Fourth Amendment simply does not apply to eavesdropping."

Four Justices disagreed, arguing that where monitored meetings are prearranged, as in the White case, the Government has a minimal obligation to get a warrant before listening in. Justice John Harlan called third-party bugging a danger that could undermine even the most innocent confidential relationships between citizens. "Were third-party bugging a prevalent practice," said Harlan, "it might well smother that spontaneity—reflected in frivolous, impetuous, sacrilegious and defiant discourse—that liberates daily life."

### Overruling Mitchell

After years of confusion over the legalities of electronic eavesdropping, Congress attempted to set rules in the Omnibus Crime Control Act of 1968. Law-enforcement agencies were permitted to wiretap in ordinary criminal cases, provided they first obtained a court-approved warrant. Under the Fourth Amendment to the Constitution, such warrants require "probable cause"—proof that officials are probing with

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specific evidence of a crime, not just trying to trap possible wrongdoers. The 1968 law, though, did not limit the President's power "to obtain foreign intelligence information deemed essential to the security of the United States" or "to protect the United States against the overthrow of the Government by force."

**Serious Threat.** Unfortunately, the law did not say whether the President's agents need warrants in such cases. The Supreme Court has not ruled on that subject—nor has it ever suggested that warrants are unnecessary in cases of domestic subversion. Yet Attorney General John Mitchell has authorized no-warrant wiretaps of domestic radicals who Mitchell is convinced pose a serious threat to national security. According to Mitchell, the Government's authority is implicit in the President's power to wage war and protect the country; he is the first Attorney General to make such a claim. On that assumption, Mitchell did not seek court approval in authorizing wiretaps on conversations by one of three members of the White Panther Party who were charged with conspiracy in the bombing of a Central Intelligence Agency office in Ann Arbor, Mich.

Lawyers defending the White Panthers cited a 1969 Supreme Court ruling that requires prosecutors to disclose bugging evidence so that trial judges may determine whether it was gathered in violation of the Fourth Amendment. When Mitchell balked at disclosure, U.S. District Judge Damon J. Keith ordered the Government to heed the rules or drop the case. Mitchell promptly appealed the case to the U.S. Court of Appeals for the Sixth Circuit in Cincinnati.

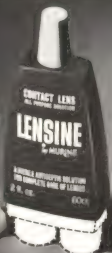
**Awesome Power.** Last week the appellate court rejected Mitchell's argument. Declaring that there was not "one written phrase" in the Constitution or the statutes to support the Justice Department's position, the court ruled that the Constitution forbids wiretapping of domestic radical groups without court approval. Speaking for a 2-1 majority, Judge George C. Edwards rebuffed the Administration's claim of a unilateral right to conduct domestic wiretapping. That "awesome power," said Edwards, does not belong to the Executive Branch alone. Edwards, a former Detroit police chief, was skeptical of Mitchell's assurances that Attorneys General would be discreet in using the power. "Obviously," said Edwards, "even in recent days, this has not always been the case."

The immediate impact of the decision, the first by an appellate court on the issue, was to uphold Judge Keith's ruling in the White Panther case and make it the law in the Sixth Circuit (Tennessee, Kentucky, Ohio and Michigan). More important, if the decision is upheld by the Supreme Court, the Justice Department will have to get warrants in order to bug suspected domestic subversives. Since it apparently has not done so up until now, it would not be able to prosecute on the basis of any wiretap evidence it may now have.

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## SPORT

### The Fastest Wrists in the East

Table tennis, that vicious art of demolishing an opponent with reflex action, deadly patience and a featherweight celluloid ball, had its murky origins in the late 19th century. The game seems to have been invented by an American or an Englishman; it was originally promoted in Britain and the U.S. by toy and game companies, under the patented name Ping Pong. As a competitive sport, it has seldom been taken seriously in this country, and today it is usually relegated to suburban basements, where sons can wreak Oedipal vengeance

T. TARDIF



SWEDEN'S BENGTSOON v. JAPAN'S ITO  
Compounding the ignominy.

on their panting middle-aged fathers. Not so elsewhere. In Europe and, above all, in Asia, table tennis is definitely a big-league sport and sometimes a national obsession. Japan, which began to dominate international competition shortly after World War II, has an estimated 40,000 tournament players. Former Japanese table-tennis greats like Ichiro Ogimura are as revered as Babe Ruth was in the U.S. In the early 1960s the Red Chinese also moved into the top world ranks. Now some 100 million Chinese play the sport, and one plant in Canton alone produces 70,000 balls a day. Premier Chou En-lai, himself a buff, urges the Chinese to excel at table tennis in order to rid themselves of "that old inferiority complex toward the Westerners."

**Political Spin.** And excel they did—until 1965, when they dropped out of international tournaments in the wake of Mao's Cultural Revolution. Last week, in the 31st World Table Tennis Championships at Nagoya, Japan, the Chinese were back again, reconfirming their

prowess as the fastest wrists in the East. In the competition with 308 players from 54 countries, their 22-member team swept four of the seven main events and won the Swaythling Cup, the table tennis counterpart of the Davis Cup. Sometimes using the traditional "handshake" grip of the West (as opposed to the "penholder" grip developed in Japan), the Chinese took up aggressive stances barely a yard from the table and triumphed with relentless, smashing attacks.

If anything, the spin on their game was more political than ever. Before the tournament started, they successfully demanded that the Nationalist Chinese be excluded. Then their star, Chuang Tse-tung—whose fearsome forehand drive made him world men's singles champ from 1961 through 1965—forefeited his shot at regaining the title when he refused to play the contender from Cambodia. Finally, at tournament's end, the Chinese made an extraordinary gesture by inviting the American team to visit China this week.

**Reappraisal Needed.** For the Japanese hosts, and for most of the 4,500 fans who thronged daily into the Aichi Prefectural Gymnasium, the results were a severe blow. Japan won only one title—in the women's team competition—for its worst showing since 1952. To compound the ignominy, the Japanese saw their 1969 world singles champ, Shigeo Ito, upset in the men's final by Sweden's Stellan Bengtsson, 18. Said a crestfallen spokesman for the Japanese delegation: "We simply have to have a sweeping reappraisal of our techniques."

And what of the Americans, who with five men and four women constituted one of the smallest teams in Nagoya? They finished 21st in the women's standings, an even more lackluster 28th in the men's. Where table tennis is concerned, the U.S. is still not far from the basement.

### The Icehouse Gang

Earlier this year, while the Boston Bruins were roaring toward an Eastern Division title in the National Hockey League, Star Defenseman Bobby Orr was asked to do a TV commercial. It would have shown him making a sloppy play because he hadn't eaten his Wheaties. His attorney, Alan Eagleson, disdainfully rejected the idea. "Bobby Orr," said Eagleson, "does not get paid to make mistakes."

Neither do his teammates. When regular-season play ended last week, the Bruins had not only won the division title easily, but had eclipsed no fewer than 35 N.H.L. records—itsself a record. In setting new marks for the most victories at home and on the road, they made more goals (399) than any team has ever scored in a season. Ten Boston players each put in 20 or more, which is roughly equivalent to a base-

ball team's having ten .300 hitters. Center Phil Esposito alone netted 76, far surpassing the old record of 58 set by Chicago's Bobby Hull in 1969. Little wonder, then, that although the Bruins split the first two games of the Stanley Cup quarter-finals with the Montreal Canadiens, they were heavy favorites to repeat their 1970 cup victory.

**Teddies No More.** Under Coach Thomas Johnson, a former Montreal defenseman, Boston is an awesomely versatile and balanced club, capable of dizzying speed and split-second playmaking. Its popular image, though, is of a body-checking, fist-swinging style of play that delights the fans and keeps the players in stitches. BOBBY ORR and THE ANIMALS: PLAY TONIGHT, say the

JOHN KLUEDER—SPORTS ILLUSTRATED



BOSTON'S BOBBY ORR  
Leading to the promised land.

headlines when Boston comes to town. In one of the many scraps during their Stanley Cup opener, Bad Boy Defenseman Don Awrey twisted the neck of Canadian Marc Tardif's sweater so tightly that Tardif's breathing was cut off and he sank to the ice like a rag doll.

The bruising Bruins of today, however, were for years more like Teddy bears. They had not won the Stanley Cup since 1941, and prior to 1967 they went for eight straight seasons without even making the playoffs. Toward the end of those hapless years, the N.H.L. began expanding from six teams to its present 14. While many other clubs suffered from the resulting thin spread of good players, Boston made some shrewd trades, cultivated junior prospects from Canada and put together a hard-hitting Icehouse Gang—comparable in talent and toughness to the celebrated Gas House Gang of baseball's St. Louis Cardinals in the 1930s.

The most important of these acquisitions was Bobby Orr, who some hockey experts believe is already the





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best all-round player in the game's history. In his first season (1966), he was the N.H.L.'s rookie of the year and made the All-Star team (on which he has played ever since). In 1970, he won the N.H.L. awards for best defenseman, highest scorer and most valuable player. Amazingly, for a defenseman, Orr this season broke six scoring records, including most assists (102, beating his own record of 87) and most goals by a defenseman (37).

**Promised Land.** On the ice, Orr has both blinding speed and a diverse repertory of shifts moves. Skating at full steam, he will suddenly come to a dead stop in front of a startled defender. Then, without losing the puck, he can pivot in a full circle and either flip a backhand pass to a teammate or bolt around the defender. In a variation on the classic give-and-go of basketball, he will lob a lazy pass across the blue line to the center, then streak for the net in time to receive the return pass and slap it in. His awed teammates call him Moses—"because he has led us to the promised land."

Building around Orr and longtime veteran Bruin John Bucyk (51 goals this year), Boston tapped the minors for Goalie Gerry Cheevers and Center Derek ("Turk") Sanderson. The hairy, mustachioed Sanderson, a forechecking terror and a Bruins "policeman," is one of the league's best at controlling face-offs. From the New York Rangers, Boston acquired John McKenzie, a hard-charging right-winger who scored 31 goals this season. From the Chicago Black Hawks came another fine right-winger, Ken Hodge (43 goals), plus Centers Fred Stanfield (24 goals) and Phil Esposito. The fast, gangling "Esposito" has been playing as if scoring had just been invented. His 76 goals constitute only one of the ten new scoring records he set this season, among them the most points (152) and the most game-winning goals (16).

**Other Climaxes.** The Bruins are almost as colorful off the ice as on. Sanderson, with a *Playboy*-style pad and an unbuttoned lip, plays the role of a freaked-out Joe Namath. "Scoring goals," he likes to say, "isn't the only climax in my life." Esposito festoons his locker with trinkets to ward off "evil spirits." Orr has become a prospective millionaire. He is co-proprietor of a successful hockey camp and is just launching a hockey equipment company with projected first-year sales of \$1,250,000.

Not that Orr or any of the Icehouse Gang need worry about security for a while. Already the commanding force in hockey, they are shaping up as a sports dynasty to rival such formerly great teams as baseball's Yankees, football's Packers and basketball's Celtics. Orr, for example, is only 23. Esposito is 29, Sanderson 25 and Hodge 26. At the moment it may still be a debatable proposition whether they are the greatest team the game has ever known. But clearly they will have ample time in which to prove it.

## MILESTONES

**Died.** Manfred B. Lee, 66, co-creator of Ellery Queen, the genius of deductive detection; of a heart attack; in Roxbury, Conn. In collaboration with his cousin Frederic Dannay, Lee wrote seven books of short stories and 35 novels about Queen, the solemn first-person protagonist. The pseudonym was eventually carried over to a monthly detective-story magazine, a long-lived radio program and a television series. All told, including short-story anthologies, Ellery Queen enjoyed book sales of 125 million. Keeping their writing methods a Queenlike mystery, Lee and Dannay developed such rapport that they were able to confound and amuse interviewers by completing each other's sentences.

**Died.** Lewis Gruber, 75, tobacco executive; in Manhattan. A crack salesman who smoked three to four packs of cigarettes a day, Gruber joined the tobacco firm of P. Lorillard Co. in 1924, became president in 1956. His campaign promoting the Micronite filter helped propel Kent domestic sales from 3.4 billion to 36 billion in two years. Putting at doctors' warnings, Lorillard advertising claimed "We're Tobacco Men, Not Medicine Men," prescribed Old Gold cigarettes (another company product) "For a Treat Instead of a Treatment."

**Died.** Paul Scott Mowrer, 83, journalist and author; of a heart attack; in Beaufort, S.C. Sent to Paris by the *Chicago Daily News* in 1910, Mowrer belonged to the new generation of adventurous but analytical World War I foreign correspondents. He reported the early years of the war from behind French and German lines and hired other dashing young reporters for the *News*, including his brother Edgar and Raymond Gram Swing, later radio's calm oracle. Mowrer covered the Versailles Treaty talks and the Rif war in Spanish Morocco, became adviser and go-between for diplomats and statesmen. He won the first Pulitzer Prize for foreign correspondence in 1928, returned home to become editor of the *News* for nine years.

**Died.** Gertrude Kappel, 86, opera star of the 1920s and '30s; in Munich. A specialist in supersoprano parts by Wagner and Strauss, Kappel was admired both for her beautiful voice and her ability to dig deeply into the psychology of opera's more peculiar characters. She sang Elektra in the Metropolitan's first production of the Strauss opera in 1932, upsetting some critics by her classical vocalism in this frenzied role, sending others into raves even for her vivid dancing. Among her admirers was Richard Strauss himself, who at the time preferred her Elektra to all others.

**Died.** Igor Stravinsky, 88, musical colossus of the 20th century (see MUSIC).

## Profile '72

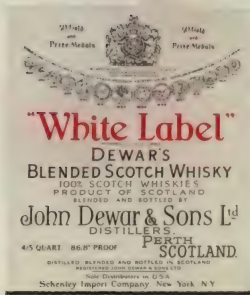
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## THE PRESS



JOHN SCALI  
Inside after 29 years.

### Recruiting the Opposition

Richard Nixon employs more public relations professionals, policy packagers and image makers than any President in history. Yet credibility continues to elude his White House as it did Lyndon Johnson's, especially in regard to Indochina. This week the President reached into the ranks of the enemy—the Washington press corps—to take on John Scali, ABC's veteran diplomatic correspondent, as a full-time "special consultant" on Administration policies.

At the start of Nixon's term, Scali had turned down an offer to be Assistant Secretary of State for Public Affairs. A determined digger who often gets a story simply by relentless badgering of sources, he mystified many of his colleagues by joining the Nixon team now. "I just can't figure it," said NBC's Herbert Kaplow. But the chance to help package policy rather than simply peddle it swayed Scali. "I see it as a unique opportunity," he says, "to see what it's like on the inside after 29 years of watching it from the outside."

**Lending Perspective.** Scali, who took the job after an 80-minute talk with the President, is known to feel that the Nixon Administration's press relations will not improve as long as Spiro Agnew continues "blunderbuss attacks from the pulpit." Scali's acceptance of Nixon's offer suggests that the President agrees. "My role," Scali says, "will be to sit and talk to the President about his information problems." As to Viet Nam: "I believe he is headed in the right direction—namely, out."

A balding, owl-eyed man of 52, Scali is a flashy dresser with an appreciative eye for good-looking girls. He spent 17 years as a diplomatic correspondent for the Associated Press in Washington be-

fore joining ABC in 1961. He is best remembered for a non-journalistic role as go-between during the Cuban missile crisis of 1962. He won the trust of the Russians, met a Soviet embassy staffer several times in Washington restaurants, and relayed messages to the White House that helped resolve the tense impasse.

Scali's function has been only vaguely outlined. Says a White House aide: "He has a lot of experience in foreign policy. He'll be able to give an additional point of view and lend perspective to the President." Scali will also take on at least part of Henry Kissinger's task of briefing small groups of newsmen and Congressmen on foreign policy. Even if Scali can't solve Nixon's image problem, he should be able to relieve Kissinger of the burden of being the only swinger in the White House.

### No Place to Go but Up

On newsstands now inundated with naughties, nudies and assorted onetime no-noes, the bestselling hard-sex publication is *Screw*, the tabloid that has inspired imitation by more than a dozen equally raunchy rivals.

*Screw's* rags-to-riches story has been one of continuous legal troubles, but until now none of them had forced any change in format. Last month a three-judge panel in New York City's Criminal Court found it obscene, and *Screw* is taming itself a trifle in a sort of legal lobotomy.

The judges' objections went beyond the newspaper's editorial content—typically, unretouched photos of men and women, singly and in enthusiastic groups, performing all manner of sexual acrobatics. The decision specifically found illegal the many ads offering dildos and other sex paraphernalia, and classified ads soliciting participants in sex acts that clearly violate New York's penal law. So *Screw* did away with dildo display ads and printed a notice to all of the would-be users of its classified columns that henceforth it "can no longer accept personal ads which solicit persons to break the law." But retreat hardly meant repentance. "We will still accept personal ads," the notice went on, "but they must be phrased in such a way as not to compromise the integrity of *Screw* or the integrity of the

law, as ridiculous and unfair as that may be."

The obscenity conviction brought only a comparative wrist slap to *Screw's* co-founders, Publisher Jim Buckley, 26, and Executive Editor Al Goldstein, 35. Each could have received a \$6,000 fine and six years in prison, as demanded by the district attorney. But the judges levied only fines of \$1,500 apiece. Both men promptly paid up, announced appeals and went back to publishing. But two more obscenity trials for *Screw* lie ahead, both based on specific seizures of relatively recent issues.

**Stablemates.** Buckley and Goldstein started *Screw* in 1968 with a stake of \$350, half from Buckley, the other half from Goldstein's wife Mary, then a stewardess for Pan Am but since fired because of her association with the publication. Bribes induced some two dozen Manhattan news dealers to handle the first issue's 7,000 copies. *Screw* grossed \$650,000 in its first year and more than \$1,000,000 in 1970.

Buckley and Goldstein piously proclaim that their sheet is not just another specimen of sado-sex journalism, but the distinction seems elusive in *Screw*. The writing style is often prosaic and juvenile, and the four-letter argot is flung against a wide variety of institutions and individuals—among them the New York Times (which once unwittingly carried an ad for *Screw*), the TV networks, J. Edgar Hoover, Billy Graham and Richard Nixon. On the tamer side, there have been interviews with Joe Namath and Timothy Leary and an in-bed session with John Lennon and Yoko Ono.

If anything distinguishes *Screw* from its many imitators, it is a simple humor of sorts. Buckley claims that "we're at least 65.3% spoof." Whatever *Screw* is, it makes money. Though legal costs (\$77,000 in less than three years) cut heavily into net profit, Buckley and Goldstein clear enough to pay themselves salaries (\$25,000 a year for Buckley, \$7,800 for Goldstein) and support a staff now expanded to 22. They also publish a pair of *Screw* stablemates called *Gay* and *X*. Last week, as if to prove that sex is not the only thing on their minds, Goldstein and Buckley said they would soon bring out a monthly travel magazine called *Nomad*. Goldstein promises that it will be "slick, straight and swinging—but totally without sex."

BUCKLEY (LEFT) & GOLDSTEIN OF "SCREW"





## EDUCATION

### Savage Strike in Newark

Urban schools are often so bad that despairing parents no longer care whether their children attend. Militant blacks blame city teachers—most of them white, some of them black. Last week these pressures blocked settlement of a savage teacher strike in Newark, already the longest in the history of any major U.S. city. As a result, more than half of Newark's predominantly (80%) black pupils stayed out of school for the tenth straight week.

Newark's crumbling schools have fallen behind for years. In 1968, only six out of every 100 pupils were reading above the national norm. Guards have been on hand regularly in the city's 89 schools, vainly attempting to prevent vandalism and racial clashes.

A year ago, Newark's unionized teachers struck for 16 days. An arbitrator granted their demands for a share of con-

any discussion of reform. The board kept the schools open, but teaching broke down. Unionists insisted that blacks were out to break the union. Black leaders claimed that the union's 70% white majority had demonstrated a "racist" disregard for the city's children. An integrated group of picketing teachers was beaten to the ground by a gang of blacks using clubs and bicycle chains.

The board only stiffened teacher resistance when it pressed charges against union leaders for violating a court injunction banning the strike. The board also suspended 347 teachers for similar violations and rejected a compromise settlement worked out by another mediator that the union was willing to accept.

**Fights and Hooky.** Last week, under pressure from Mayor Gibson, the board finally agreed to accept the mediator's proposal—but called public meetings before voting formally to ratify the contract. By then the strike had become

On the showdown ratification vote, the board's 4-4 tie was broken by the black president, Jesse Jacobs. Joining Gibson's other appointees in opposing the mayor's wishes, he banged his gavel defiantly. "Free at last!" he shouted. "I vote no!" Gibson, now ironically allied with the white board members, found chances for compromise vanishing; the union threatened a campaign to recall him. At week's end the outlook was for a cooling-off period of at least a week before negotiations might resume. Newark's restless children, who have been watching TV and wandering the streets having "hooky parties" during the strike, started their spring vacation. When they get back to school, it seems unlikely that they will learn any more than they ever have.

### Repackaging Federal Aid

In the past decade, Congress has viewed federal aid to education in three different ways: first as a suspect notion, then as a sacred cow and now as a bog of bureaucratic hobbling. Last week the



BEATEN TEACHER



MILITANTS AT BOARD MEETING  
Reform buried by guerrilla warfare.



PRESIDENT JACOBS

trol over class sizes, curriculums and assignments to such nonteaching duties as patrolling halls and lunchrooms. Future disputes were to be hammered out in binding arbitration. But militant, separatist blacks, led by Writer Imamu Amiri Baraka (LeRoi Jones), immediately suspected that the union would use its power to block reforms and frustrate "community control."

**Clubs and Chains.** The militants got a sympathetic ear last July when the election of Newark's new black mayor Kenneth Gibson gave the school board its first majority of blacks and Puerto Ricans. When negotiations on a new teachers' contract began in January, the board balked at renewing the arbitration clause, hoping to strengthen its educational control. The union struck.

Near guerrilla warfare soon buried

merely a symbol for the rekindled racial hostilities that erupted in Newark's 1967 summer riot.

When the board convened, at least ten fights broke out; a white reporter for the *New York Times* was beaten by blacks who grabbed his notebook and wallet. No one had time for the views of Rita Majette, 22, a black union member who complained: "I have kids in seventh-grade, reading on a fourth-grade level, but how can it be my fault? I've only been teaching for one year." The attitude of some unionists had become far meaner. "They want to tell us what to do," complained Teacher Frank Marzerella. "Do I have to be judged by people with a third-grade education?" Replied the Rev. Henry Cade, a black minister: "No racist union will take away our education."

general confusion left U.S. public schools facing considerable uncertainty.

At issue in the House was an effort by liberal Democrats to latten President Nixon's school-aid requests for the 1971-72 academic year by \$728.6 million. Such moves have worked twice since 1969: last year Congress overrode a presidential veto, thus giving Nixon a Scrooge image. But last week's attempt lost by five votes. The defeat underscored rising public skepticism toward the idea that more money guarantees better schools. Last week Nixon himself reflected that mood in his message to Congress on 1972-73 federal aid to elementary and secondary schools.

Nixon proposed a modest \$200 million in new federal spending, although he did not specify where the money would be found. To promote deseg-

regation and concentrate existing funds on special teaching for disadvantaged children, he urged cutbacks in administrative staffs and library construction. Nixon hopes to sweeten the pot with some of the \$5 billion in no-strings "general" revenue sharing that he wants Congress to give states. If the states followed their current budget pattern, 41% of the federal money would go to education. But would it? Skeptics fear that some states would use no-strings money for other purposes.

**National Priorities.** The issue is clearest in Nixon's proposals for turning programs now aimed at specific goals into broader "special" revenue-sharing grants. In last week's message, Nixon urged such a shift for 97 "narrow purpose" programs that now disburse \$2,800,000 for everything from Braille records to experimental curriculum materials. They include virtually every section of the Johnson Administration's Elementary and Secondary Education Act of 1965.

The red tape swaddling those programs has slowed down local school administrators, who must draw up detailed spending proposals to get their funds. The proposals must then be shuffled in Washington by as many as 24 different officials. In some programs, administrative costs eat up 50% of every dollar spent. The upshot is that comprehensive planning vanishes as states get mired in the federal maze.

Under Nixon's plan, no state would receive less federal aid than it gets now, but the miscellaneous grants would be merged in "national priority areas," notably the teaching of disadvantaged children. Others include vocational education, books and counseling. Within each category, state education departments, currently of widely varying quality, would make the major decisions about which school districts would receive the money. The plan's logic is hard to fault, although some observers worry that it might only shift red tape from Washington to the state level.

The proclivity of some states for short-changing the poor and using federal money to promote segregation encouraged the strict federal guidelines in the first place. To curb this tendency, Nixon would make state education departments retain some guidelines for special revenue sharing in poverty areas.

**Church and State.** Nixon also said that no money should go to schools that discriminate racially. His regulations, though, would be enforced by state education departments, not Washington. Thus, Albert Shanker, president of New York City's United Federation of Teachers, voiced a common concern: Nixon's plan might effectively turn civil rights enforcement over to "the very states guilty of discrimination." Another problem: Nixon intends to "considerably broaden" aid to private and parochial schoolchildren. Critics fear that the South's all-white "segregation academies" qualify for such aid. In ad-

dition, states that gave more federal funds to parochial schools might face deepening legal disputes over whether they were violating clauses in their own constitutions that separate church and state.

Nixon has not yet submitted specific legislation to carry out most of his education recommendations. Amid the swirl of opposition to his revenue-sharing proposals in other areas, Congress is almost certain to extend current school-aid programs and take up revenue sharing next year.

## Term-Paper Hustlers

What old grad can forget the scourge of the term paper: those sunny afternoons in the dusky stacks, the night-long bouts with procrastination, the notes on white index cards that convey recrimination rather than inspiration?

Thousands of collegians in the Boston area, that's who. The reason appears under several names: International Termpapers, Inc., Universal Term-

in the Boston *Globe*, the term-paper entrepreneurs expect to have produced 10,000 essays for a gross of \$250,000. Several are setting up branches in other New England states, New York and California.

**Glut of Longhairs.** Ghostwriting on a modest scale has been a campus play for many years. But turning the practice into big business has taken men of vision like Ward Warren, 22, a senior at Babson College near Boston. Last fall Warren sank \$25,000—earned in the delicatessen and the snack bar he owns—into Termpapers Unlimited. He now says that he is close to breaking even. "The secret of my success," he says earnestly, "is that my employees really believe in what they're doing. Also, there are a lot of brilliant, long-haired people out of work around here, and I rely on them." Indeed, the nationwide Ph.D. glut has produced a readymade crop of writers, including, the hustlers claim, some instructors at Harvard and M.I.T. Most of the firms remove from their files any paper that gets less than a "B" from two professors; they also say they keep track of where papers are submitted to make sure the same instructor does not get telltale duplicates.

Business comes mainly from what the entrepreneurs call "proletarian" campuses, where students have few hard-to-fake seminars with their professors—the University of Massachusetts, Boston University and Northeastern. One customer is a father who is trying to assure academic success for his two children by contracting to have all their papers written by the pros.

**Best in Years.** The pros have snowed the pros. One returned a paper with the remark: "Best paper seen in years." The Babson faculty has pronounced Warren's activities "very distasteful," but the college plans no action against him on the theory that his customers are guilty of plagiarizing—not he, Harvard Dean of Students Archie Epps has asked university lawyers how the school can proceed against the sharpsters. In fact, the colleges are virtually powerless to prove a given paper was plagiarized.

Meanwhile, the entrepreneurs are in some disagreement over the ethics of their work. Warren claims that customers use his products only as reference sources. "Listen," he insists, "I've taken surveys of 400 of my clients, and the overwhelming majority say that they don't plagiarize." One professor cites the case of a senior she confronted who confessed "four years of successful plagiarism, parental pressure and a conviction of his intellectual incapacity for college." Richard Mari, 26, a former technical writer for General Dynamics who heads Quality Bullshit, says that plagiarism is the whole point. "The kids have so many term-paper assignments now that they're an obstacle to a degree rather than a learning technique. As long as we're operating to help people, the business is not only justifiable, it may even be commendable."



"THE THEMATIC FUNCTION OF THE GHOST IN HAMLET: 10,000 WORDS, \$198.90"

pers, Termpapers Unlimited and Quality Bullshit. Since September these new, aboveground organizations have turned out more than 4,000 term papers for students willing to pay \$3 a page for standardized material and \$6 a page if the paper is custom-made.

For off-the-rack themes, a buyer with the money first checks topics in stock, then tells his instructor that he has "chosen" to "write" about one of them. Up-to-date offerings include "Black American Heroes," "Nixon's Influence on the 1970 California Election," "Problems and Possible Solutions to Air Pollution." One service cheerfully composed a theme titled "Why I Wouldn't Use a Professional Term Paper Writing Service."

By the end of the spring rush, according to an exposé of the industry

## MUSIC

### The Rightness of His Wrongs

"Mark him well." Diaghilev said of the 27-year-old Igor Stravinsky. "He is a man on the eve of celebrity." When celebrity came, Stravinsky had a long day of it: a stormy dawn of controversy, a high blaze of creative influence, a waning afternoon of waspish polemics and high-priced memorabilia. Last week the night finally fell, as Stravinsky died in Manhattan at 88.\* It was the end of six decades of dominance, in which he had incalculably shaped the musical thought of generations to come. It was the end, too, of what Conductor Colin Davis called "a chain of great composers left us by the 19th century, and a line of music that began with the early church music of the 14th century." With his passing, the music world lost its most vital link with both the future and the past.

The young Stravinsky's artistic calling card was a bombshell: *The Rite of Spring*, a sophisticated evocation of primitive myths and energies completed in 1913. Conductor Pierre Monteux recalled that when he first heard the composer run through it on the piano, bobbing up and down to accentuate its jagged rhythms, "I was convinced that he was raving mad." Later, when the work had its Paris première at the Théâtre des Champs Élysées, many members of the audience thought so too. They erupted in perhaps the most notorious riot of music history, booing, fighting one another, pelting Monteux and the players with programs and hats.

No Repeats. Polytonal, polymodal, polyrhythmic, *The Rite* took some getting used to. It did not so much reject conventional harmony, as did the twelve-tone works of Arnold Schoenberg. Rather it brought contrasting tonalities crashing dangerously into one another. With its unexpected clustered stresses and pile-driving climaxes, it raised rhythm to an unprecedented pre-eminence. Jarring the 20th century out of its lingering romanticism, it was more than "the cornerstone of modern music," as Pierre Boulez calls it. It was one of those works, like Joyce's *Ulysses* and Picasso's *Les Femmes d'Alger*, that announced a new consciousness.

*The Rite* influenced nearly every composer who followed except the serialists—and Stravinsky himself, whose genius never repeated itself. His earlier work had been marked by the colorful nationalistic flavor of his native Russian tradition. The son of famed St. Petersburg Bass Feodor Stravinsky, he was raised in an aristocratic and intellectual atmosphere and became a favored pupil of Rimsky-Korsakov. His



IGOR STRAVINSKY AT 32



AS DRAWN BY PICASSO (CIRCA 1920)

CONDUCTING N.Y. PHILHARMONIC (1966)



first durable score, the orchestral fantasy *Fireworks*, was written in 1908 as a wedding present for Rimsky's daughter Nadia.

Freeze-Dried Piquancy. *Fireworks* dazzled Diaghilev, and the impresario commissioned Stravinsky to write a ballet. The result was the Tartared and feathered *The Firebird* (1910). This was followed a year later by the even more brilliant *Petrushka*, in which the solo piano part projected a Pierrot-like puppet at a Russian fair—a part realized on the stage by the great Nijinsky. Both works were to remain Stravinsky's most popular with the public, to his eventual dismay. They also established his lifelong identification with the dance, which in later years produced notable collaborations with George Balanchine and the New York City Ballet.

In the years following *The Rite*, Stravinsky narrowed down to spare and unusual combinations of instruments and voices. *Les Noces*, composed between 1914 and 1917, was scored for four vocal soloists, chorus, four pianos and percussion. In 1918 came *L'Histoire du Soldat*, piquant, freeze-dried chamber music for seven players. Works like *Pulcinella* (1920) and *The Fairy's Kiss* (1928), based on themes of Pergolesi and Tchaikovsky, crowned Stravinsky's neoclassical shift away from the Dionysian revels of his youth. *Oedipus Rex* (1927) and *Apollon Musagète* (1928) eloquently confirmed not only a new sobriety and austerity but also a new allegiance to the Apollonian ideal of lucidity and order.

Tending the Image. The astonishing thing about Stravinsky's development up to this point was that unlike Schoenberg, he never turned his back entirely on the tonalities of the 17th, 18th and 19th centuries or on the modal style of earlier eras. In the 1940s, Stravinsky, always a wandering cosmopolite, moved to Hollywood, near Schoenberg's home. Yet the two rivals maintained a chilly distance from their respective hilltops. It was only in 1953, two years after Schoenberg's death, that Stravinsky finally embraced serialism. Of the dozen or so twelve-tone works he produced prior to his death, the best by far were *Agon* (1957), *Movements* (1960) for piano and orchestra, and the "Huxley" *Variations* (1965).

Such pieces, though much less doctrinaire than Schoenberg, were probably the least understood and least performed of Stravinsky's whole corpus. Yet like the rest of his work, they were unmistakably Stravinsky, and their quirky unconventionality continued to open fresh byways to other composers. In the words of Aaron Copland: "It is the rightness of his 'wrong' solutions that fascinates one. The notes themselves [seem] surprised at finding themselves situated where they are."

One indisputable factor in Stravinsky's conversion to serialism was the arrival within his household of Schoenberg's former research assistant, the

\* Sibelius was the only major composer to live longer (91). Schutz and Verdi died at 87, Telemann and Saint-Saëns at 86, and Vaughan Williams and Richard Strauss at 85.

young American conductor Robert Craft. In addition to becoming Stravinsky's rehearsal conductor, literary collaborator, companion and surrogate son, Craft was the unofficial custodian of the Stravinskian image. In this role, especially through a series of remarkable "conversations with" books, he enabled a wide audience to savor the composer's pungent personality.

**Bisexual Hairdo.** Despite Stravinsky's fragile, birdlike appearance (in his prime, 5 ft. 3 in., 120 lbs.), he had indomitable physical zest. Repeated onslaughts of lung congestion, blood clotting and surgery reduced his body to "a ruin," according to his doctor. Yet until the end, which was attributed to arteriosclerotic heart disease, every one of his maladies seemed somewhat curable, save for his hypochondria. The remarkable features that had been caricatured by such friends as Cocteau and Picasso—bull-fiddling nose, guitar-like ears, pince-nez, natty mustache—remained mobile and alert. Stravinsky carried on with the conversational crowds he loved so well, often speaking to one guest in French, another in English, or in Russian to his wife Vera, a former costume designer for Diaghilev. And always there was plenty of good food and wine.

Nor did the 30-year-old Ballantine's Scotch that he consumed in moderate rations (down from the half quart a day of former times) ever dull his tart, epigrammatic wit. Conductors, critics and colleagues regularly felt its sting. Stravinsky once said of Leopold Stokowski that "he must have spent an hour a day trying to find the perfect bisexual hairdo." He called *New Yorker* Music Critic Winthrop Sargeant "W.S. Deaf." Of a new Gian Carlo Menotti opera, he said, "It is 'farther out' than anything I've seen in a decade; in the wrong direction, of course." He also took on broader targets. The technology of today's recording engineers, he complained, removed natural sound and human errors, producing "a super-glossy, chem-fab music substitute that was never heard on sea or land, including Philadelphia." And to him, the one conspicuous success of Puccini's *La Fanciulla del West* was "the attempt to make it American—simple-minded."

**Jaunty Note.** Not surprisingly for a composer who lived to such a ripe age, Stravinsky wrote his own requiem. This week his body was to be flown to Venice for burial in the Russian corner of the cemetery of San Michele. His *Requiem Canticles* (1966) were to be sung at a final service in the church of Santi Giovanni e Paolo. All this is in accordance with the composer's own devout wishes. Still, even Stravinsky himself might have liked the additional jaunty note of the epitaph he tossed off nine years ago, before leaving for an African conducting tour: "If a lion eats me, you will hear the news from him. He will say, 'The old man was tough, but a tasty meal.'"

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BATTLE SCENE FROM "WATERLOO"

## CINEMA

### The Prussians Are Coming! The Prussians Are Coming!

The Duke of Wellington may have believed that the Battle of Waterloo was won on the playing fields of Eton. Napoleon was sure that the French General Staff had failed him. Sergei Bondarchuk has another idea. Though the English and French exchanged considerable fire and shed small oceans of blood, they had very little to do with the outcome. The beau stratagem was performed by old General Blücher and his vindictive Prussians. They and they alone are responsible for the outcome in *Waterloo*, or, as its subtitle might read, *History Revised for Anglophobes*.

Russian Director Bondarchuk took a brief, withering look at Napoleon swallowed by the long Moscow winter in *War and Peace*. But that was on home grounds. This time, on western European turf, he rather favors the little Corsican with properly heroic proportions. But he gives the British aristocracy only the back of his hand. Every man Jack of them is portrayed as an arbitrary prig, none more so than Wellington (Christopher Plummer). Yet even these lead soldiers give more credible performances than Rod Steiger in his oppressive, self-congratulatory Napoleon. Scene after marching scene, every familiar Steigerian trick passes in review: the pop eyes, the mouth like a gunny sack with the strings drawn, and below all, the voice that CHIMES TO A BELLOW AND THEN falls to a portentous whisper.

In *War and Peace*, Bondarchuk found himself at home with war and inept with peace. In *Waterloo*, he again di-

rects less than he deploys. Psychological insight is conveyed by closeups of the stars' eyes, interminable cross-cuts from the Duke of Wellington to Napoleon Bonaparte and fatuous "voice-over" soliloquies, like Napoleon's: "This Englishman has two qualities that I admire—caution, and above all courage."

But once the battle begins, the centuries are sheared away and the red-and bluecoats are recalled with harrowing accuracy. The serried ranks of French overflow the British positions. The infantry companies form huge squares, firing at an enemy that seems, like dragon's teeth, to sow new fighters as the old ones tumble. And mud undoes both sides. Aerial cameras traverse the horizon, catching cannon and cavalry as they give the battle almost Tolstoyan sweep and power.

**Eagle's View.** It is, unfortunately, a fleeting triumph. Almost too late for Wellington but none too soon for the viewer, the Prussians, all teeth and bayonets, burst from the woods to end the battle. As they do, the score blares a Haydn anthem. The theme, Bondarchuk is well aware, became the melody for *Deutschland über Alles*. The subtlety of that touch matches H.A.L. Craig's screenplay and Steiger's Napoleon.

*Waterloo* is not without its educational value, though even that would have been enhanced by a clearer map than the one Wellington uses; the youthful student or amateur will at least learn the elementary strategies of the period and enjoy an eagle's view of the battle that changed Europe's life. As for the golden history and legend, they lie buried beneath this delayed replay of a primer on strategy.

■ Stefan Kanter

### On the Road

*Joe Cocker/Mad Dogs and Englishmen* is a road movie like *Hope and Crosby*, or for that matter, *Hopper* and *Fonda*, never dreamed of. Last year Cocker, his compatriot Leon Russell and a few dozen musicians, singers, wives and assorted girl friends set out under the collective name *Mad Dogs and Englishmen* to make music all around the country. They played some 65 gigs in 57 days while a camera crew recorded the whole scene, onstage and backstage. The result is a 114-minute carnival of high spirits and solid rock 'n' roll that is almost as much fun to see as it must have been to live through.

Cocker and his friends careened from New York City to Plattsburg to Dallas to Santa Monica, laying down the kind of hard-driving music whose thumping, unrelenting rhythm is almost impossible to resist. The film's four-track stereo sound makes the theater throb, and the camera captures Cocker's famous, frenzied delivery—holly man seized by a vision, sweating, growling, rolling his eyes and moving in great bursts of spastic energy. By contrast Russell surveys the scene with an almost glacial cool as he strums an electric guitar or pounds what remains one of the cleverest rock pianos in listening distance.

*Joe Cocker* will inevitably be compared to *Woodstock*; and it will suffer by the comparison; it lacks the dynamism and sense of history of the original. But if *Joe Cocker* cannot compete with the best, it has enough talent and energy, and an abundance of sensational sounds, for its audience to sit back and, like the old song says, let the good times roll.

■ Jay Cocks



COCKER IN "MAD DOGS"  
Holy man with spastic energy.



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## BUSINESS

# Getting More Power to the People

**W**HAT ever became of the great energy shortage? Only a few months ago, headlines sprouted warnings that a pinch on fuel supplies might force winter power blackouts or brownouts, factory shutdowns, possible rationing of oil and natural gas. Now as spring sunshine warms the land, those dark forebodings have either been forgotten or consigned to the list of Great Crises That Never Happened.

In fact, the shortage was not so much averted as postponed. Fuel supplies were adequate only because the General Motors strike and the economic recession limited industrial demand for power, while relatively moderate weather over much of the nation held down home heating needs. In some future winter of business boom and bitter cold—or some future summer of blistering heat that balloons air-conditioning demand—the U.S. is almost sure to face the same threat again.

To escape a real crisis next time around, the Nixon Administration must begin now to draft a coherent national energy policy. It must measure the nation's real energy needs for the foreseeable future and determine what combination of Government price-regulating programs, import controls and conservation measures will be required to fill those needs.

**Crossed Wires.** At present, U.S. energy policy is a mix of uncoordinated, sometimes conflicting and occasionally inept programs carried out by half a dozen highly independent agencies. By administering oil import quotas, the Interior Department, for example, helps to keep domestic oil prices high; the Federal Power Commission tries to protect consumers by keeping natural gas prices

low. The unintended result has been to discourage exploration for gas, a relatively nonpolluting fuel, because it is only one-third as profitable as oil when it is pumped out of the ground.

In a different way, the Atomic Energy Commission has retarded the development of coal supplies. A few years ago, the AEC was so carried away by the appealing prospects for atomic power that it predicted a vast expansion. Those hopes were thwarted by soaring construction costs, a nationwide squeeze on capital funds, shortages of trained personnel, delays in delivery of equipment, and environmentalists' objections to the thermal pollution of waterways, which can be caused by nuclear plants. The main result of the general euphoria, to which the AEC contributed, was that mining companies held back on developing coal reserves for fear of competition from nuclear plants that turned out to be phantoms.

**Sine Qua Non.** One reason for the confusion in policy is that Americans have been accustomed to act as if cheap and abundant energy were assured through eternity. Power—to heat and light buildings, propel cars and planes, keep computers and other machines purring—is the *sine qua non* of an industrial society. The U.S. has been consuming it far more greedily than any other nation. Americans make up 6% of the earth's population but use approximately 40% of its energy-producing fuels. According to a study by the Petroleum Industry Research Foundation, the nation's energy consumption since 1965 has been rising about 5% a year, or more than four times as fast as the U.S. population.

In their cars, for example, Americans

have increasingly demanded power-operated windows, seats and other gadgets, which require oversize engines that gulp much more gas than would be needed merely to propel the auto. There are some indications that factories may also be wasting power. Energy consumed per unit of industrial output fell steadily from 1920 through 1966, but since then it has been rising. One consequence is that the nation's known reserves of easily recoverable fuel declined in the late 1960s, at least in relation to consumption. That situation was reversed in oil last year because of the big find on Alaska's North Slope; proved reserves rose 24% during 1970. Known reserves of natural gas, however, have gone down in each of the past three years.

In theory, this should not happen. Potential U.S. fuel reserves are so enormous that energy economists use an arbitrary measure, the Q,\* to make the numbers less astronomical. The nation's total energy consumption in 1970 was 71 Q. The U.S. Geological Survey estimates that the country contains 5,162 Q of oil, 3,317 Q of natural gas and 32,000 Q of coal. In addition, Canada holds resources far exceeding its own energy needs (see map).

**No Easy Job.** The trouble is that much of this treasure is not recoverable with today's technology at today's prices. The Rocky Mountains of Wyoming and Colorado, for example, hold billions of barrels of oil imprisoned in shale. Estimates of the price that would have to be charged for oil crushed and burned out of that rock run as high as \$5 a barrel v. \$3.25 for crude oil pumped out

\* One Q equals a quadrillion—1,000,000,000,000,000—BTUs.



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of U.S. wells, and roughly \$2 for Middle Eastern crude. In addition, the shale-extraction process piles up mountains of ash that would create environmental hazards. The Rockies also hold billions of tons of coal, but the deposits are too far from population centers to be of immediate economic use.

Other resources can be exploited more readily—but determining the most efficient and economic pattern of development is no easy job. Ideally, the goals of a national energy policy would be to ensure that power needs could be met from reliable sources at a reasonable price with a minimum of ecological damage. That ideal will be impossible to achieve because many of the goals are in conflict with one another. But the U.S. should begin now to face up to some difficult questions and answers. Among them:

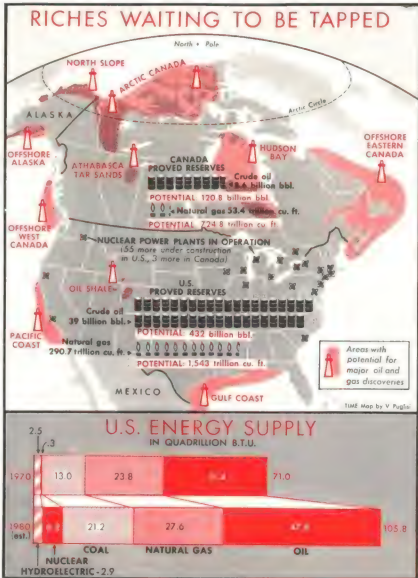
#### WHAT ENERGY SOURCES SHOULD THE U.S. DEVELOP MOST INTENSIVELY?

The nation is consuming most rapidly the fuel of which it has least. It derives 43% of all energy from burning oil, but oil constitutes only 5% of domestic fuel reserves. What else should the U.S. use? Coal reserves are gigantic, and some coal men argue that Washington could profitably divert much of the money that it spends on nuclear-power research to study ways to take the sulfur out of coal smoke. But even if coal could be cleaned up, the cheapest method of digging it out of the earth is strip mining, which turns large expanses of natural beauty into scenes of lunar desolation. Gasifying coal underground so that it can be moved easily by pipeline offers one way to make fuller use of the nation's resources; the feat is technically possible, though at present it is expensive.

In the long run, the nation must rely more on nuclear power, if only because fissionable materials, unlike any other fuel, can be used over and over again. Breeder reactors, in fact, produce more fuel than they consume. So far, nuclear power has been a disappointment: the U.S. today gets only a tiny fraction of its power from nuclear energy, less than half as much as the AEC had been predicting a few years ago. One reason: coal- or oil-fired power plants are still 20% to 40% cheaper to build and operate than nuclear plants. But improvements in technology are bound to bring those costs down, and nuclear power will make more economic sense when the prices of fossil fuels rise—as they inevitably will. Though thermal pollution remains a problem, it is technologically easier to solve than the air pollution caused by oil and coal. Utility men estimate that by 1980 the U.S. will get 6% or more of its energy from nuclear power.

#### SHOULD THE NATION TIGHTEN OR LOOSEN ITS LIMITS ON FOREIGN OIL?

The U.S. is becoming increasingly dependent on overseas sources. Imports, mostly from Venezuela, now supply 23% of the 14.7 million bbl. that the



U.S. burns daily. Paul McCracken, President Nixon's chief economist, estimates that the share could rise to more than 40% of the nation's oil needs by 1980, even assuming that by then 2,000,000 or more bbl. a day will be coming in from Alaska's North Slope.

Venezuelan oil reserves are limited. Though new fields are being developed around the world from Indonesia to the North Sea, their production potential will not be known for some time. Thus, future U.S. imports would have to be bought largely from the politically unpredictable states of North Africa and the Middle East, which contain by far the world's greatest concentration of proven oil resources. That would make the U.S. vulnerable to strong-arm tactics, more so because the producing nations have lately begun to act in concert. In January six Middle Eastern countries won a 30% price increase by threatening a joint shutoff of oil, and Libya two weeks ago

forced an even larger increase by raising a similar threat. Closer to home, Venezuela last month unilaterally decreed tax increases, which have raised the price of fuel oil as much as 20% in the U.S. Northeast.

At one extreme, the U.S. could bar all imports. The nation would then attain self-sufficiency, because prices would rise high enough to encourage the crushing of oil shale, mining of Rocky Mountain coal and larger-scale nuclear development. But consumers would be angered by the extra costs, which are impossible to measure but could easily run to tens of billions of dollars a year. At the other extreme, Washington could increase energy supplies and reduce costs at least temporarily by throwing the U.S. wide open to foreign oil. But that would make the U.S. dangerously dependent.

Clearly, the U.S. has to follow a middle course, seeking to work out a bet-

ter balance between domestic fuel production and foreign supplies than is provided by the present oil-import program, which has neither kept costs down nor provided any guarantee against shortages. Washington should let in some more oil from the rest of the world. It should do this either by liberalizing quotas or replacing them with a less restrictive tariff system, as a Nixon-appointed task force recommended—to no avail—a year ago. Such a move would have to be coupled with the building of a domestic reserve supply to guard against a Mideast shutoff. To do that, the import task force suggested storing domestically produced oil in salt domes or steel tanks. Another alternative would be to develop fields in areas where production costs

development of the Athabasca tar sands, which hold an estimated 320 billion barrels of oil that could be extracted economically at prices only slightly higher than those prevailing now.

Economic Adviser McCracken has begun to talk privately of organizing a North American common market in energy. That fascinating idea frightens many Canadian politicians, who fear a Yankee grab for their nation's resources. The problem is at least partly one of semantics; the same politicians proclaim eagerness for unrestricted access to continent-wide fuel markets. A U.S. offer of long-term contracts to buy more Canadian oil, put forth as a straightforward business proposition, might meet a ready reception.

The U.S. also could route Alaskan oil to the Midwest by building a pipeline through Canada's Mackenzie River valley (TIME, March 29). This would encourage exploitation of Canadian oilfields that lie along the route. As a *quid pro quo*, the U.S. would have to make some guarantee to divert Venezuelan or domestically produced oil to Eastern Canada if Arab nations shut off Mideast oil. Eastern Canada is not connected by pipeline to the oilfields in the Canadian West and the Arctic, but buys Mideast crude because it is cheaper.

**Higher Prices Ahead.** For some time, letting in more oil from Canada and elsewhere should limit increases in energy costs. Nixon's import-quota task force estimated that the present controls cost consumers \$5 billion a year that could be saved by buying more low-priced foreign petroleum.

In the long run, however, the U.S. will have to accept somewhat higher costs for energy. The recent Mideast and Venezuelan oil-price boosts indicate that foreign petroleum bargains will not last forever. Domestic oil prices, while high by world standards, still make it profitable to extract only about a third of the oil from each U.S. producing well: the rest is too difficult to reach at prevailing prices. If the uncertainty of foreign supply eventually makes it necessary to draw more oil from U.S. wells, higher prices or tax incentives would be needed to develop the necessary technology. As for natural gas, the U.S. should now permit the price to rise enough to encourage full-speed exploration and drilling—even if the boost required turns out to be 25%, as some energy experts anticipate. The nation needs more gas, and present prices are too low to coax it out of the ground.

Whatever the specifics, the prime essential of a national energy policy is that all pieces fit into a sensible pattern of fuel production and use. The present lack of policy is leading to a combination of intermittent shortages and soaring prices. If it continues, the nation may find itself starving for energy in the midst of potential plenty, and paying an exorbitant price as a result.

## MONEY

### The Dollar's Dilemma

"Something has got to give," says Edwin A. Reichers, senior vice president of New York's First National City Bank. "This outflow cannot go on forever."

What worries Reichers, and most other top international bankers, is that dollars have been pouring into foreign countries at an extraordinary rate. Principally because banks repaid the sum of money that they had borrowed abroad, the U.S. balance of payments deficit hit \$10.7 billion in 1970, and in this year's first quarter alone it amounted to about \$4 billion. Two weeks ago, rumors swept the Continent that several strong European currencies would be revalued upward, in effect devaluing the dollar. On the strength of those rumors, corporate treasurers and nimble speculators sold billions of dollars for other currencies in Switzerland, Belgium, The Netherlands and especially West Germany. Central banks quelled that speculative spree, mainly by buying all the dollars that were offered. But, like a stabbing pain that passes quickly, the minicrisis was a warning that the dollar faces more trouble.

**Agonizing Reappraisal.** Foreign financial and political leaders are increasingly searching for ways to limit the dollar influx, perhaps by restricting investments financed from the U.S. Though the Europeans and Japanese are reluctant to revalue their moneys, the countries with strong currencies may have to make a joint upward movement of 5% to 10% within a year or two. Washington policymakers would not be at all displeased, because that would make U.S. exports more competitive in world markets. Most often mentioned among the candidates for revaluation: the German mark, the Swiss and Belgian francs, the Dutch guilder, the Japanese yen. For the longer term, the Common Market nations are slowly moving toward creating a Eurocurrency that would challenge the dominance of the dollar in world monetary affairs.

The shakiness of the dollar has also begun to change U.S. domestic economic policy. The Federal Reserve Board has recently started to pay somewhat more attention than it has lately to strengthening the dollar in international markets and somewhat less attention to stimulating the economy at home. It has boosted short-term interest rates again. Combined with interest-rate cuts that were recently made in several Continental countries, this should slow the flow of unwanted dollars into Europe. Still, the deep-seated problems about the dollar's role as the world's key currency remain unresolved. Says Yale Economist Robert Triffin, a prominent monetary expert: "We are in the middle of an agonizing reappraisal—and total revamping—of the international monetary system." No one will predict exactly where it will lead, but almost all experts sense some uneasy times ahead.



DIGGING INTO TAR SANDS  
Stranger tie with the closest ally.

are high. The wells would be capped and kept in reserve, but reopened in event of a possible interruption of foreign supplies.

#### WHAT OTHER FOREIGN SOURCES CAN BE DEVELOPED?

The U.S. should open its markets to much more oil from Canada, its closest and most reliable ally. Washington has long infuriated Canadians by treating their country as a "surge tank"; drawing on it for supplies when shortages threaten, cutting back again when the pinch eases. That policy is economically as well as politically shortsighted. Canada could offer much fuel at prices below U.S. quotes: Canadian crude now sells for \$2.75 a bbl. In return the U.S. could offer Canada sales outlets for oil reserves, which Canadians at present have neither the capital nor the domestic markets to develop. Oil wells in Alberta, which could produce 1,700,000 bbl. daily, are now capped for lack of markets in either country. Assurance of a U.S. market also could speed de-



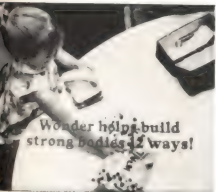
## ADVERTISING

### Quieting the Children's Hour

Adults who complain about the noise clutter of commercials on television might think themselves lucky after watching programs beamed at children. American youngsters are beguiled, bullied and often bamboozled by a fury of hard-sell promotions featuring vigorous pitchmen like Captain Crunch, Tony the Tiger and Fred Flintstone. On Saturday mornings about half of the nation's children aged two to eleven watch television cartoon shows. The National Association of Broadcasters' code allows these nonprime-time programs to be freighted with up to 16 minutes of plugs an hour; on prime-time features for adults, the limit is ten min-



FRED FLINTSTONE HAWKING VITAMINS



TV PLUG FOR WONDER BREAD

utes. Lately, not only the quantity but the quality of TV sales spiels for children have become targets of reform-minded parents' groups, consumerists and federal officials.

This week the controversy will reach President Nixon's desk in the form of a report from a panel that assessed the impact of mass media during last year's White House Conference on Children. The report is critical of most of the material aimed at children, but singles out television as the worst offender. It recommends that the Government establish an organization to enforce truth-in-advertising standards. The organization would include a staff of lawyers, who

would study programming practices and oppose the renewal of broadcast licenses for stations that played on the gullibility of children.

**Cardboard Steel.** Panel Chairman Fred Rogers, producer of one of television's leading children's programs, *Mister Rogers' Neighborhood*, says: "Commercials stress that in order to play you need a toy, that your mental resources are not enough." Another panelist, Mrs. Joan Ganz Cooney, creator of *Sesame Street*, worries about the distortions in children's ads. "The product,"



PRODUCER ROGERS  
Up to 16 minutes every 60.

she notes, "looks attractive on the screen because the cardboard materials are shiny and made to look like steel."

Consumer Advocate Robert Choate, who last year caused cereal makers to snap, sizzle and puff by questioning the nutritional benefits of their products, is pressing for a tough code to regulate promotions. He is particularly incensed by what he contends is the lack of nourishment in most edibles, especially cereals, hawked to the pre-teen market. "The commercials advise your child to equate sugar with health and snacks with happiness," he complains. Choate's code would require that precise nutrient values be listed in food commercials for children; promotions based on an item's sugar content would have to warn viewers about the possibility of tooth cavities. The code would also ban more than four food ads an hour on children's programs and effectively bar all drug, medicine and even vitamin messages during youngsters' viewing time. Choate believes that vitamin ads can invite children to substitute capsules for a balanced diet and lead to an overdependence on pills generally.

The Federal Trade Commission has been carefully monitoring commercials directed at children. It has recently warned the Topper Corp. against using

commercials that exaggerate the performance of Johnny Lightning cars, and claimed that Mattel Inc. was inaccurately presenting its Dancin' doll as capable of walking and dancing by itself. A few weeks ago, the FTC challenged Wonder Bread commercials, which ask, "How big do you want to be?" and promise to "build strong bodies twelve ways." To get the recommended daily allowance of calcium, for example, the FTC reports that a child would have to eat between 40 and 68 slices of Wonder Bread a day.

A Boston-based parents' group called Action for Children's Television (A.C.T.) has petitioned the Federal Communications Commission to bar all ads from children's shows. Understandably, the merest hint of such action is enough to jangle the nerves of broadcasters and advertisers. Last year producers of toys, games and hobby crafts spent about \$32 million on network television spots, and cereal makers budgeted about \$54.4 million, though not all went for children's programming. The petition has practically no chance of success, but the FCC inquiry that it has prompted should keep the issue alive for some time.

Some firms selling to children have already altered their promotions to more accurately reflect their products. And for the past two months, the NAB code has required that all toy commercials end with a five-second shot of the product minus music, sound effects or trick photography (such as speeding up the film to exaggerate the power of toy cars). Explains Stockton Helfrich, the code authority director: "We felt—and we got psychiatric advice on this—that this would establish unequivocally exactly what you get for your money."

## STOCK MARKET

### Double Blow for the Big Board

For most investors, the big stock market news last week was that the Dow Jones industrial average hit a 22-month high of 920. To the Wall Street establishment, the movements of the average were of only secondary interest. Their attention was riveted on two innovations that moved the New York Stock Exchange into a new era of intensified competition that could reshape the nation's securities business.

At minimum, these changes make the N.Y.S.E. a less secure and lucrative place for a broker. For 179 years, the Big Board has had two major attractions: it offered a broker a commission structure that competitors could not undercut and it was just about the only place where a broker could trade the nation's best-known and most popular stocks. Last week both of those keystones began to crumble, raising the question: Who really needs the exchange?

The first change requires free-market pricing—a principle of capitalist economics that the exchange, which regards itself as the citadel of U.S.



capitalism, had been reluctant to accept. The Big Board had insisted that member brokers abide by a fixed minimum commission schedule. Last week it bowed to an order from the Securities and Exchange Commission and abolished fixed commissions on the portion of any trade in excess of \$500,000. Such trades account for about 5% of N.Y.S.E. members' commissions but are clustered among the major houses, including Salomon Bros., Oppenheimer and Goldman, Sachs.

Brokers lost no time cutting their fees to win the business of rich investing institutions—mutual funds, pension funds, trusts, insurance companies. One minute after trading began under the new rules, a \$3,958,875 block of Unifund stock changed hands at a commission lower than would have been charged the week before. How much

bonds, financial planning for their customers, even selling insurance." Some brokers foresee an eventual split of the exchanges into two markets—in effect if not in formal organization. In the more important market, institutional investors would trade stocks in huge blocks at low, negotiated commissions. In the less significant market, a declining number of individual investors would trade in small lots at fixed, higher commissions.

**Computerized Market.** Even that vision assumes that the exchange trading floor will remain the nation's central marketplace for stocks. But the second of last week's changes calls that idea into serious question. The NASDAQ computer network, which flashes price quotations for more than 2,500 over-the-counter stocks on desk-top consoles in brokerage offices throughout the country, began carrying quotes for 32 Big

Last week the NASDAQ consoles showed several spreads of \$1 a share or more between exchange and off-board prices. For example, when Northwest Bancorp. was trading on the exchange at 38½, outside brokers were offering to sell it at 37½.

Exchange officials have long contended that their system is necessary to avoid the chaos that would result if different brokers were trading the same stock at widely different prices. NASDAQ proponents retort that this idea is a relic of pre-computer days. Says Donald Weeden, head of a non-exchange brokerage firm that bears his name: "The central market is a communications concept, not a piece of real estate at Broad and Wall Street. With today's computer possibilities, we can and should have a central market stretching from London to Tokyo, made up of competing market makers with access to all inquiries from all buyers and sellers."

**American Zaiabatsu.** Whether the exchange can survive against NASDAQ competition may depend on its ability to preserve Rule 394(b) of its constitution. That rule provides that a Big Board member can trade outside the exchange only with the permission of an N.Y.S.E. official and sets up a cumbersome process for getting the permission. Its effect is to force members to make nearly all their trades in listed stocks on the exchange floor. So long as the rule is retained, the potential of NASDAQ can be exploited only by so-called "third-market" dealers—those brokers, like Weeden, who are not exchange members, yet trade in Big Board stocks. Rule 394(b) may soon come under antitrust attack. If it is overturned, there would be little incentive for anyone to keep an exchange seat, a fact that has been illustrated with brutal clarity by the price of Big Board memberships. One sold last week for \$195,000, down from a high of \$515,000 at the end of 1969.

If Big Board members start trading heavily through NASDAQ, "Wall Street" would then be well on the way to becoming a nickname for an international computer network. Such a market would have both good and bad features. Because the costs of big trading would be lower, the mutual funds might find themselves under Government pressure to reduce the fees that they charge customers. On the other hand, the market would be so fast-moving that hardly anybody but professionals could keep up with it. That would give institutional investors an even greater advantage over individuals than they have in the present market. At the theoretical extreme, a handful of mutual-fund managers could become an American version of the Japanese *zaiabatsu*, controlling much of the economy through their institutions' stock holdings. The one certainty would be that trading would hardly resemble the operation that brokers and investors have become accustomed to think of as a stock market.



LARGE-BLOCK TRADING AT SALOMON BROS.  
Who really needs the exchange?

lower is a secret, but commissions on other giant trades dropped anywhere from 10% to 80%.

The SEC has made clear its determination to force the New York and American stock exchanges to extend negotiated commissions to all trades above \$100,000. It is being prodded by the Justice Department, which has a voice in the matter because of Supreme Court decisions that hold the exchange is not exempt from antitrust laws. Commission cuts are likely to become deeper as well as wider. Some small brokerages have announced that on big-block trades they will negotiate commissions as low as a penny a share v. 23¢ for an average-priced stock under the old fixed-rate structure.

As a result, the income of exchange-member brokerages will be so drastically reduced that some may not be able to survive in their present form. SEC Commissioner James Needham thinks that many houses will diversify "into such things as money management, selling

Board and American Stock Exchange issues as well. Among them: General Motors, A.T. & T., Jersey Standard, U.S. Steel. A trader with a Big Board ticker and a NASDAQ console can thus continuously compare the prices at which these stocks are selling on the exchange with competing prices offered by brokers who are not exchange members.

On the exchange, all orders for any specific stock go to a single "specialist" who is assigned to make the market in that issue. His price quote is the only one available. But in the NASDAQ system all brokers willing to make a market in a stock feed price quotations by coded message into the computer network. A broker who gets an order presses a combination of computer keys, and the desk-top console shows him all the prices being offered. He selects the most favorable price for his client and makes the trade by telephone.

\* For National Association of Securities Dealers Automated Quotation system.



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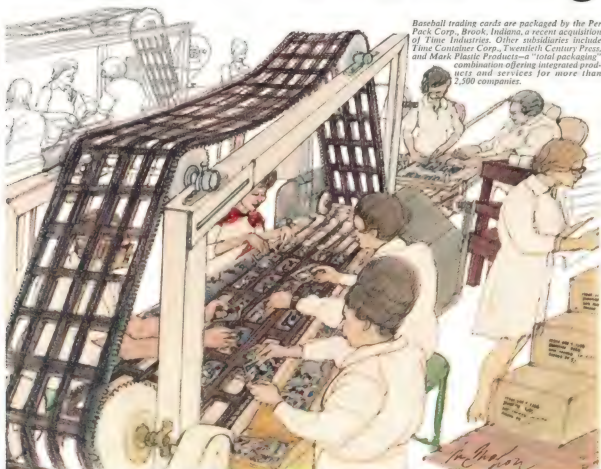
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*The speaker:* Don J. Hindman, founder and president, Time Industries, Inc.

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## BOOKS

### Cheering on the Salts

THE EUROPEAN DISCOVERY OF AMERICA: THE NORTHERN VOYAGES by Samuel Eliot Morison. 712 pages. Oxford University Press. \$15.

*So now you know, unless you're a fool,*

*That they told you all wrong, when you studied at school!*

—Samuel Eliot Morison

Like the Ancient Mariner he is, Samuel Eliot Morison stoppeth one of three—among the myths that pass for history in the European discovery of America. As a seagoing admiral, U.S.N.R. (and Harvardman), Morison gives the back of his salty hand to those modern "library navigators" (particularly Yalemen) who in 1965 swallowed whole the Vinland map story. Morison sees a fine post-1600 hand behind this document, which was dated about 1440 by its discoverers. "I have 'serious reservations,'" he writes, "the polite scholarly term for saying that you suspect fakery." Growling about "phony voyages," he swiftly slaps down as nonsense the folk legend of Prince Madoc and the Welsh-speaking Indians.\*

This is corrective—and finally definitive—history issued in "Now hear this" tones from one of scholarship's loftiest quarterdecks. Morison quotes the German statesman-naturalist Alexander von Humboldt: "There are three stages in the popular attitude toward a great discovery: first, men doubt its existence; next, they deny its importance; and finally they give the credit to someone else." Author of *Admiral of the Ocean Sea*

\* In the 12th century, so the Madoc myth goes, a Welsh prince led a colony to America. "By some mysterious process," Morison marvels, "this colony became a Welsh-speaking Indian tribe which moved west from the Atlantic shore until it became the Mandan in the Far West."



SAMUEL ELIOT MORISON

*Scholarship from the quarterdeck.*

and other books about Columbus, Morison does all an old salt can to set the log straight about those before and after his favorite explorer.

But beneath the dense set-'em-right facts, the book is a hymn to the life of the mariner. Morison has gathered together into a 1,000-year epic the sagas of all those serendipitous seamen who set sail with visions of Cathay or a Northwest Passage—or at least a new fishing ground—and instead bumped into places like Greenland, Labrador and finally the rest of North America. The familiar names are here: Leif Ericsson, discovering his mysterious Vinland around 1000 (Morison would like to believe it was Newfoundland); John Cabot, who sought a short cut to the Indies and ended up at Newfoundland in 1497; Giovanni da Verrazzano, the gentleman-explorer from Florence, who found off-

shore New York "a very pleasant place" to visit in 1524. There are unfamiliar names, too, like St. Brendan the Navigator, who in the 6th century took to sea. Morison speculates, in search of guaranteed chastity. After all, even a monastery had Irish milkmaids to leeward.

Somehow, between all the landfalls, mini-histories are fitted in—asides about mutinies and scholarly lectures on navigation, on fishing, on map making, on sea chanteys ("Heisa, heisa, vorsa, vorsa, wow, wow," to quote one). The sea turns Morison into a lyric poet who sometimes applies looser moral standards to seamen than to shorebound sinners.

In the end, *The European Discovery of America* represents Morison's romantic search for the perfect hero—the perfect mariner. He admires the seagoing sophisticates, like Sir Humphry Gilbert and Sir Walter Raleigh, who, he quotes, also made "voyages of the mind." But he loves the men who were professional sailors first and last. Of Sir Martin Frobisher, who tried three times for a Northwest Passage, he writes: "A very great seaman indeed." There is no higher praise in the Morison lexicon.

Frobisher's last letter contained this sentence: "It was tyme for us to goa through with it." For Morison this sums up the code of the best mariners. It is his code too. At 83, Morison still sails. He rides horseback, too, and occasionally shows up at his office in Harvard's Widener Memorial Library in his riding britches, looking more like a pukka-sahib colonel than a professor or an admiral. At present he is working on a biography of Samuel de Champlain as well as a sequel to his present volume. When his own time comes, the admiral will be able to say, as another of his favorites, John Davis, said to his men off the fearsome Strait of Magellan: if it be God's will "that our mortall being shall now take an ende, I rather desire that it may be in proceeding than in returning."

■ Melvin Maddocks

### Nice Girls Don't

THE SEASON OF THE WITCH by James Leo Herlihy. 384 pages. Simon & Schuster. \$6.95.

Incest, that most majestic of taboos, has had quite a literary run during the past few years. Nabokov's *Invitation to a Beheading*, though not quite Pharaonic, elegantly proffered a half sister as better than none. Gore Vidal diddled the subject in *Two Sisters*, and if there was a moral to the convoluted enigmas of Anthony Burgess's *MF*, it was never commit incest without a conundrum.

Gloria Randome does not need puzzles to approach the subject. The 17-year-old fugitive love child of James Leo (*Midnight Cowboy*) Herlihy's new novel finds that incest is purely and simply a bummer. Like her friends down at the crash pad, she handles problems with a jarring forthrightness:

"One of my hands was free. I touched



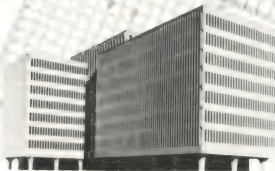
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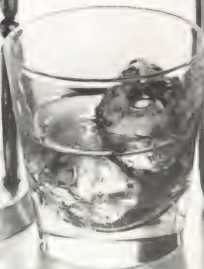
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the top of his head with it. "Hank, listen to me."

"Shh, ssh, ssh! Dreams can't talk. You're a dream."

"No. No I'm not."

"Then why do I feel so good with you?"

"Do you really want to know?"

"Yes. Tell me."

"Because you're my father," I said."

It couldn't have happened to a more vulnerable guy. Hank Glyczewicz is a bitter middle-aged cynic. He was just beginning to loosen up to his students' sweet faith in love and peace highs when Gloria wrecks him with her disclosure. She is the forgotten illegitimate daughter from a distant love affair.

Gloria, who changes her name to Witch Gliz while on the ritual lam from Mom's suburban Detroit subdivision, learns by doing and then recording her doings in a breezy diary. Sex, dope, kindness, generosity and communal living are good things because they make her feel good. Fortunately, imminent incest gives off bad vibrations before the big clutch.

Too self-consciously the moral virgin and too facile with her received wisdoms and doubts, Gloria is far less lovable than such fictional older sisters as Christopher Isherwood's Sally Bowles (*I Am a Camera*) or Truman Capote's Holly Golightly (*Breakfast at Tiffany's*). Herlily's lively stock characters and head-shop props come directly from Aquarius Central. Yet *The Season of the Witch* has its appeal, especially if regarded not as an adult book but a contribution to an as yet nonexistent publishing category—groovy books for juveniles.

■ R.Z. Sheppard

### Thief of the Heart

A FEW HOURS OF SUNLIGHT by Francoise Sagan. 185 pages. Harper & Row. \$5.95.

Though she disguises it with worldliness, Francoise Sagan is something of a moralist. In her deft little romances, one is aware of the ethical reading as well as the emotional. Like temperature and humidity, they are complementary indications of the atmosphere.

A third of the way through her new book, a man whose career has been ruined by a homosexual scandal tells Gilles, the hero: "I've never lost anything I've given. It's what you steal from people that you pay dearly for, my dear boy, remember that." Gilles remembers it all right, but he is never able to act on it. As Sagan's most complete male character to date, Gilles is a sexy, glamorous journalist who is irretrievably light-fingered with other people's emotions and their trust. At 35, Gilles suddenly falls victim to a disease he had thought only struck his friends: a paralyzing "fear of life." An enviable job and a beautiful mistress seem like heavy burdens; each day is a "grim calvary." Desperate, he decides to spend some time with his sister in



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Limoges. Neither he nor the reader is much surprised to find that the most fascinating figure in local society, Nathalie Silvener, falls deeply in love with him. Her tenderness and loyalty gradually restore Gilles' equilibrium. When he goes back to Paris, she joins him. But Nathalie has a daily beauty in her life that makes Gilles feel increasingly ugly. Beside her, Gilles decides, he will never look good, and so he subtly sets out to remove her from his life.

At nearly 200 pages this is a long novel for Sagan, but the impression of swiftness that is her signature is as strong as ever. She is as clear and easy to read as Jane Austen, and though Austen was a genius and Sagan is merely talented, they have other things in common. Both evoke a comfortable trust from the reader because they rarely strike a false note, and both tend to decorate their pages

AN H. MARTIN



FRANÇOISE SAGAN  
*Something of a moralist.*

with asides and epigrams. Here, for instance, is Gilles noting Nathalie's bookishness: "A well-read woman is less of a nuisance," he decides. "She knows more or less what to expect."

One knows as well what to expect from Sagan by now, a fact that has led to a certain amount of critical condescension. But what she delivers, though slight, is well made, wise and often funny entertainment, a relatively rare product these days.

• Martha Duffy

## Hamburg Heaven

BOSS: RICHARD J. DALEY OF CHICAGO  
by Mike Royko. 215 pages. Dutton. \$5.95.

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# TOUCHY

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# QUESTION #6

Ambulance personnel who lack the latest training are all right for routine pickup and delivery. But they're not too clear on whether you've got a heart attack or heartburn and a do or die tracheotomy is too tricky for them.

Actually, sometimes you'd be better off if those ambulance people didn't rescue you, but just held your hand.

It's estimated that over 45,000 people are permanently injured or killed every year by poorly trained ambulance people who handled them improperly before they got to the hospital.

They meant well but just didn't know any better. In many states, a hairdresser is required to have more training than an ambulance attendant.

One of those states might be where you're planning your family vacation or where you're being transferred or where your children are going to school.

So, you can't rest easily even if rescue operations are up to date at home. Your next trip could turn into a trap.

But many communities are preparing properly for accidents. They're doing something before the emergency. One area in Wisconsin under the direction of a local doctor instituted a whole volunteer rescue program called "Before The Emergency." This program showed such promise as a model for the nation that a film about it is available. In one year the film has been shown to over 10,000,000 people by the U.S. Jaycees and other civic minded organizations. It's a practical "do-it-yourself" type of film for any community.

What we are trying to do is stir up community action. We'd like nothing better than to hear that this motivated thousands of you to go up to your next community meeting and find out just how effective your emergency medical services program is.

If improvement is needed, chances are a little further training could turn your community's ambulance team into an even more capable operation.

You may want your local authorities to look into the Registry of Emergency Medical Technicians—Ambulance in Chicago. This organization is now developing a two day test for ambulance personnel that hopefully will become the national standard for medical emergency people to meet.

Now, when people ask, "What can I do to improve the world?", there is a practical answer, material available, and a film to get people to act on something that can save lives every day in every community.

We here in Wausau can help put you in touch with the people you need to know to help your community move in the right direction.

Get your club or group to view our film. To book a print, contact your local Jaycees. All your efforts may not make front page headlines, but they'll cut down on the obituaries.



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only city on earth where the likes of Big Bill Thompson and Al Capone could coexist as civic leaders. In Chicago, there is indeed a certain interchangeability between politics and other lines of work. "The Hawk," Mike Royko writes, "was the outside lookout man at a bookie joint. Then his eyes got weak, and he had to wear thick glasses, so he entered politics."

Royko is a newspaperman, a columnist and commentator for the Chicago *Daily News*. Though his book is essentially a hatchet job, released more or less to coincide with the campaign for last week's mayoralty election in Chicago, Royko sees Mayor Richard Daley as an inevitable product of the Chicago environment. The mayor was born into a workingman's family in Bridgeport, an Irish neighborhood in that South Side region known, without comment, as Back of the Yards. He was born to membership in the Hamburgs, an athletic club whose members took their exercise by beating the hejessus out of any blacks and Slavs foolish enough to stray onto the wrong side of the street. As young Hamburgs grew older, fatter and more sophisticated, the bonds of brotherhood held and forged a collective political power. The proto-mayor eventually used it to propel him into office.

The only really atypical aspect of Daley's youth was the size of his family; he was a greatly cherished only child. In a milieu where family solidarity was a virtue (and a power source) prized even above gang loyalty, Daley thus suffered a certain limitation—until he married into the numerous clan of Eleanor Guilfoyle. As an officeholder, he consolidated his family position by exploiting the rich grab bag of political patronage on behalf of the Guilfoyles. As Royko observes, "Eleanor's parents might well have said that they did not lose a daughter, they gained an employment agency."

All along, Royko insists, Daley never abandoned the original set of convictions he grew up with, though as his power increased, it became prudent to appear at least polite to other values. It did not astonish Royko when the mayor stayed inside his modest Bridgeport bungalow—he still lives there in his eminence—and not even the curtains twitched during the few nights in 1964 it took his neighbors to give the heave-ho to two Negro students who moved in a block and a half down the street.

Consequently, Royko confesses puzzlement that Daley's most consistently loyal constituency is in the black ghetto wards. Their loyalty, though, may be due to the diligence of Democratic precinct workers, who remind the voters that the continued receipt of welfare checks is somehow inextricable from the franchise. Then, being thorough in their work, says Royko, they accompany the voter into the polling booth to make sure he does not forget.

Royko's account leads inevitably to the 1968 national Democratic Convention, when the delegates were welcomed

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And that's another thing. The 1200 has an engine that can turn an honest 94 MPH wherever it's legal. It's roomy, too. There's seating for four, including a rear seat in the coupe that folds down into a sort of sporty station wagon.

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by signs proclaiming YOU HAVE ARRIVED IN DALEY COUNTRY! Daley was misguided, Royko says, to order his cops to shag Abbie Hoffman's Yippies out of the south end of Lincoln Park. The city, he contends, could not have chosen a better place to quarantine the protesters than the one they chose themselves. Instead, the police stormed in and all the world's TV audience gaped at the resulting riots. The author, indeed, may be guilty of some small taint of Chicago chauvinism when he assigns cosmic significance to that confrontation; "This is what may have determined the election and altered the course of world history—the decision that nobody would be in Lincoln Park after 11 o'clock."

No such book, of course, could be published without noting one of Daley's most famous political pronouncements. It came in 1968, after he had ridden a helicopter over the smoking West Side ruins in the wake of black riots touched off by the assassination of Martin Luther King. "I said to him [the police superintendent] very emphatically and very definitely that an order be issued by him immediately and under his signature to shoot to kill any arsonist or anyone with a Molotov cocktail in his hand, because they're potential murderers, and to issue a police order to shoot to maim or cripple anyone looting any stores in our city."

Within two days, even city hall became aware—with surprise—that the mayor's words had appalled many people outside his special world. However, Royko notes, the official strategy chosen to turn away public wrath was right in character. "It was damn bad reporting," the mayor's public relations counsel said, mildly chiding the press as he presented them with a classic *non sequitur*: "They should have printed what he meant, not what he said."

■ Keith Wheeler

#### Best Sellers

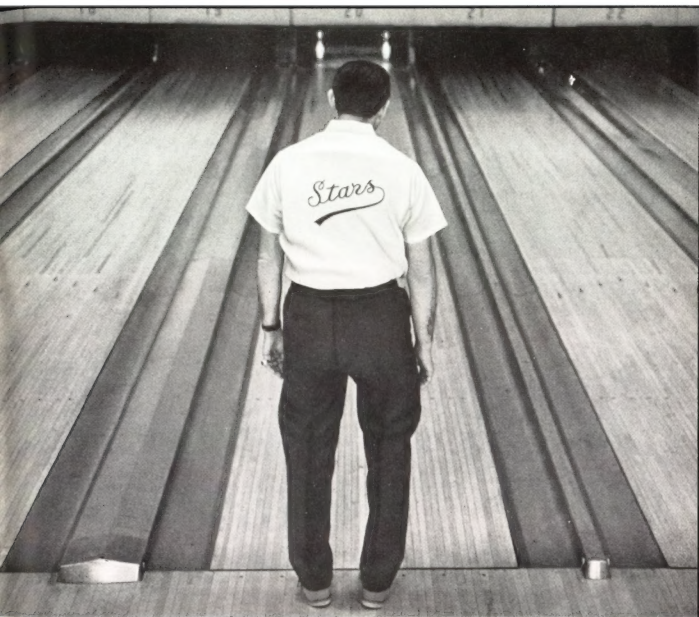
##### FICTION

1. QB VII, Uris (1 last week)
2. The New Centurions, Wambaugh (2)
3. The Passions of the Mind, Stone (4)
4. The Underground Man, MacDonald (5)
5. The Throne of Saturn, Drury (3)
6. The Antagonists, Gann (7)
7. Rich Man, Poor Man, Shaw (8)
8. Islands in the Stream, Hemingway (9)
9. Love Story, Segal (10)
10. Vandenberg, Lange

##### NONFICTION

1. The Greening of America, Reich (1)
2. The Sensuous Man, "M" (4)
3. Stilwell and the American Experience in China, 1911-45, Tuchman (3)
4. Future Shock, Toffler (2)
5. Bury My Heart at Wounded Knee, Brown (7)
6. Khrushchev Remembers, Khrushchev (6)
7. Civilization, Clark (5)
8. Inside the Third Reich, Speer (9)
9. The Grangees, Birmingham
10. Boss: Richard J. Daley of Chicago, Royko





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## 2. Add the ride and comfort of a luxury car.

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